



**SHELL ECO-MARATHON
UNITED STATES 2022**
PARTICIPANT HANDBOOK



Shell Eco-marathon • 2022
BRILLIANT MINDS COMING TOGETHER TO BUILD A LOWER-CARBON WORLD

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1. DELIVERIES TO INDIANAPOLIS MOTOR SPEEDWAY

VEHICLE AND EQUIPMENT DELIVERIES

Teams have three options to deliver their vehicle and equipment to Indianapolis Motor Speedway:

1. Delivery through Agility
2. Delivery through another freight forwarder
3. Drive equipment and vehicle to the event themselves

Delivery instructions vary according to which option the Team has chosen.

1. DELIVERY THROUGH AGILITY

Agility Fairs & Events is the official shipping partner for all Shell Eco-marathon events for domestic and international shipments, brokerage and customs support. Teams are encouraged to contact Agility at SEMUstudents@agility.com to receive a quote or assistance with Dangerous Goods procedures.

2. DELIVERY THROUGH ANOTHER FREIGHT FORWARDER

If you are using another freight forwarding company, please read the following guidelines very carefully and make sure you communicate them clearly to your freight forwarder.

All deliveries must be made on **Friday, April 8**.

All pick-ups must be made on **Thursday, April 14 ONLY**.

The delivery address is:

Indianapolis Motor Speedway

Shell Eco-marathon United States 2022

4750 West 16th Street

Indianapolis, IN 46222

Team Name attn. Geo Sedun, Shipping Manager

No deliveries will be accepted before or after these dates, so make sure your transporter is aware of this. If your transporter turns up before or after these dates, delivery will not be possible and the truck will have to turn back.

On-site contact for delivery:

Geo Sedun: +1 917-526-2268

Please contact ecomarathonamericas@shell.com if you have questions about the shipping procedures.

Note that all items and materials that must be brought into the facility are subject to material handling charges and are the responsibility of the Team.

The Organisers will deliver all Team crates to their assigned garages in the paddock area upon arrival. Agility will also have a representative available to provide shipping assistance during the competition.

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3. TEAMS DRIVING TO INDIANAPOLIS THEMSELVES

If a Team is driving their Shell Eco-marathon vehicle and equipment to the event themselves, carefully note the following information:

- Team arrivals and deliveries to the paddock will be accepted from 12:00 p.m. to 05:00 p.m. on Sunday, April 10 and from 08:00 a.m. to 12:00 p.m. (noon) on Monday, April 11 ONLY.

The address is:

Indianapolis Motor Speedway
4790 West 16th Street
Indianapolis, IN 46222

Teams must follow the traffic marshal's directions and park the vehicle. Once parked, the Team Manager and present Team Members must proceed to participant check-in.

SHIPPING DANGEROUS GOODS

Commercial transport of Dangerous Goods is a risk if not correctly packed or handled. If the goods are hidden, declared incorrectly, left undeclared, packed or labelled incorrectly, health and safety is severely compromised. Commercial freight transportation regulations have increased significantly worldwide within the last couple of years requiring Shell Eco-marathon student teams to seek and understand the current restrictions/regulations, and the ramifications for non-compliance.

Agility Fairs & Events Logistics is the Global Freight Partner for Shell Eco-marathon. Their global expertise will assist you in identifying any shipping restrictions/regulations for any chemicals and selected batteries. They will outline the process of packing and shipping your Shell Eco-marathon vehicle crates through commercial carriers to Shell Eco-marathon events worldwide.

Shipping Dangerous Goods such as batteries, pressurised containers or flammable liquids is heavily regulated internationally as improper packing can have catastrophic consequences. As per [Article 24j](#) teams are required to seek early guidance regarding the shipment of any Dangerous Goods from their commercial freight company or from our global freight partner, Agility Fairs & Events. Teams may contact Agility at SEMUstudents@agility.com.

If teams are using air freight to ship their vehicle, they are advised to ship their batteries separately from their main crate by sea to minimise risks and to avoid having their whole crate being designated as 'Dangerous Goods'.

We require the following documentation from **all teams shipping commercially**, i.e. not taking the competition vehicle to the venue in their own cars, to show that care has been taken to pack the goods safely. There are two forms of documentation we accept:

- Dangerous Goods certificate from an official Dangerous Goods packer stating that the crate has been packed according to international safety standards.

Or

- A Shipping Form + Dangerous Goods Packing Declaration which requires a person of authority at your institution to confirm that
 - (i) They have thoroughly checked the packing of your crates and it is safe to be transported via Commercial Transportation.
 - (ii) They will undertake any financial and legal liabilities that might arise from incidents caused by failures to pack Dangerous Goods safely.

The forms of documentation we accept differ based on the type of freight you are using to transport your crate.

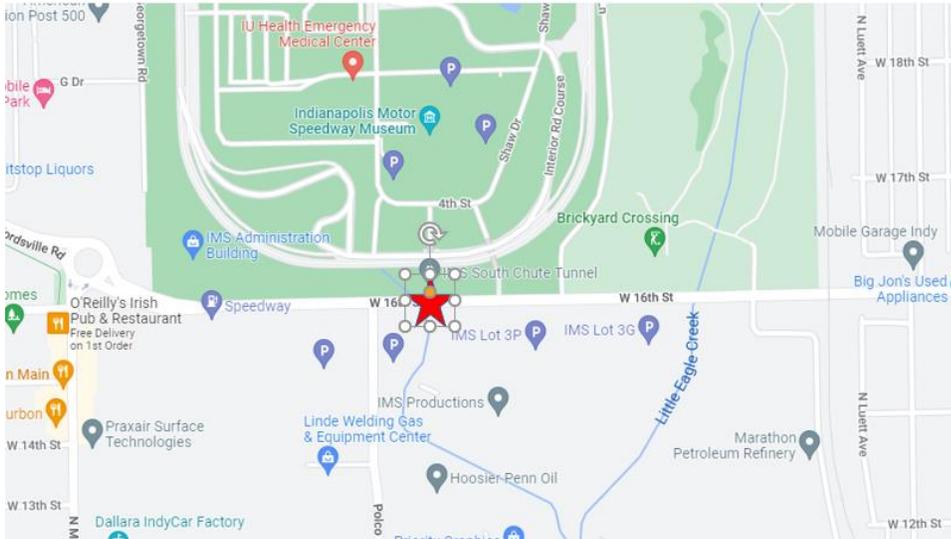
| AIR FREIGHT | SEA FREIGHT | ROAD FREIGHT |
|--|---|---|
| <ul style="list-style-type: none"> ■ <i>Only</i> Dangerous Goods certificate allowed if there are Dangerous Goods in the crate ■ If you have no Dangerous Goods in your crate, we will accept the Dangerous Goods Packing Declaration <i>provisionally</i>. We will check on site and if this is a false declaration, penalties up to disqualification will be levied. | <ul style="list-style-type: none"> ■ Dangerous Goods certificate or ■ Dangerous Goods Packing Declaration | <ul style="list-style-type: none"> ■ Dangerous Goods Packing Declaration |

Teams must upload their Dangerous Goods documentation to the registration portal as part of the logistics registration phase, before the crate gets picked up by their off-shore freight forwarder. The penalty applied to Teams who bypass the requirements for commercially shipping Dangerous Goods may be considered as the third infraction according to Article 8 of Chapter I.

More information on Dangerous Goods can be found in the Dangerous Goods Shipping Guide. The template for the Dangerous Goods Packing Declaration can be found in the here.

All air freighted crates will be inspected by a certified Dangerous Goods Inspector provided by the Organisers prior to being collected at the end of the event. Should any non-compliant material be found in the crate by our inspector, the Team will be contacted to resolve the issue or authorise disposal of the material. If we do not receive a response within 24 hours, we will remove and dispose of the non-compliant material so as to not delay the shipment process.

2. GETTING TO INDIANAPOLIS MOTOR SPEEDWAY



Address:

Indianapolis Motor Speedway
4790 West 16th Street
Indianapolis, IN 46222

Indianapolis Motor Speedway is located northwest of downtown Indianapolis. Student teams should use the South Chute Tunnel, following directions for the Indianapolis Motor Speedway Museum.

PARKING

Free parking will be available for all participating teams at Indianapolis Motor Speedway.

Teams can begin moving their trailers into Indianapolis Motor Speedway on Sunday, April 10, at noon. Please follow on-site parking instructions upon arrival.

Please take note of the trailer parking hours below. If you cannot park within these hours, please let the Organisers know as soon as possible.

- Sunday, April 10: 12:00 p.m. - 6:00 p.m.
- Monday, April 11: 9:00 a.m. - 12:00 p.m.
 - You will not be able to unload your trailers before Sunday, April 10 at 12:00 p.m.
 - Camping in the parking lot is strictly prohibited. Teams planning to stay on-site for the event must unload all their equipment upon arrival and settle in the designated camping area.
 - Trailers cannot be driven into the paddock area for any reason other than loading and unloading purposes.

3. ACCOMMODATION AND FOOD

ACCOMMODATION

CAMPSITE

Free, covered camping will be provided on-site at Indianapolis Motor Speedway.

Showers (separate for males and females) will be provided. Camping equipment will not be provided by the Organisers. Teams are encouraged to bring their own sleeping bags and tents. The indoor camping area is carpeted, but not padded, and we encourage campers to bring padding as needed. Please note Participants cannot sleep inside their own vehicles in the parking lot.

Access to the camping area will be limited to those camping there.

No one under 16 years of age is permitted to camp.

Please note spots will be assigned on a first-come, first-served basis after teams complete their check-in on site.

The campsite will be open from 12:00 p.m. on Sunday, April 13, until 09:00 a.m. on Thursday, April 14.

Please note that the Indianapolis Motor Speedway external gates are closed overnight, and Teams who are camping will not be able to leave the site between 10:00 p.m. and 7 a.m. for the duration of the event.

HEALTH AND SAFETY

- No cooking allowed at the campsite.
- Do not use electrical heaters in the tents.
- There should be no consumption of alcohol or narcotics.
- Noise levels are to be kept to a minimum after 10:00 p.m.
- Drones are not allowed to be operated anywhere on the venue, including campsite and parking lot.
- Wear appropriate footwear at all times.
- Insect repellent and sun cream should be applied liberally.
- Medics and security staff will be available on site around the clock. Should you require medical assistance and the medical office appears closed, please inquire with security.

Breaches on any of the above rules may be subject to the penalties as laid out in Article 8 of the [Shell Eco-marathon 2022 Global Rules, Chapter I](#).

HOTELS

For Teams who prefer hotel accommodations, there are several hotels near Indianapolis Motor Speedway. Please note there are no special rates this year, Teams are welcome to do their own research and find the option that better suits their needs and budget.

FOOD

Participants are responsible for purchasing all their meals. Indianapolis Motor Speedway food vendors will be open for breakfast, lunch, and dinner for the duration of the event.

There are ATMs located on-site.

4. CHECK-IN AND CHECK-OUT PROCEDURES

CHECK-IN

1. Participant check-in will open at Indianapolis Motor Speedway on Sunday, April 10 at 12:00 p.m. (noon).
2. The entire Team must come to the check-in desk inside the Registration tent, adjacent to the event parking lot.
3. We will check with the Team Manager if the Team has correctly submitted all mandatory documents. We will issue participant badges, lanyards and camping wristbands (if applicable), as per the number of Participants currently present (up to 10 per Team), goodie bags (up to 10 per Team) and the Team checklist.
 - a. We will not be able to give out accreditation for members not yet present. They will need to collect their own accreditation upon their arrival.
4. After registration, all Team Members will be required to watch the safety video before unloading trailers and camping gear. After the safety induction, each Team Member will receive a wristband verifying the completion of the safety requirements.

CHECK-IN PROCESS FOR TECHNICAL INSPECTION

1. Each Team Manager, Driver(s), must report to the Pre-Technical Registration station located inside of the Technical Inspection area. At this station, the Team Manager, Driver(s), will be photographed and will receive a specific QR code.
2. Once step 1 has been completed, you are free to enter the Technical Inspection area. Before you approach the Inspection entrance your Team must be prepared as follows:
 - a. Complete vehicle with liquid fuel tanks near emptied;
 - b. Team must have a bound hard copy of their technical documentation;
 - c. Driver(s) must be present;
 - d. Team Manager must be present;
 - e. A maximum of three Team Members, including the Driver(s), are allowed to enter the inspection area to assist;
 - f. No carts or tool chests are permitted inside the inspection area, unless there is sound reason and only with the approval from the Organisers.
3. Finally, once a Team has completed their full inspection, the Team Manager must report to the Pre-Technical Registration area. If the vehicle is fully compliant with the rules, the Team will receive the Shell Eco-marathon 2022 technical and safety sticker to place on their vehicle. Without those stickers, team will not have access to the test track and main track for practice and competition.
4. Teams needing a re-check must first have a Team Member (no vehicle) approach the inspection entrance and inform the inspector which station they need for re-check. If the station is not overloaded with vehicles, you will be allowed to enter at that station rather than waiting in the primary inspection queue.

PADDOCK AREA

Both the Prototype and the Urban Concept Paddocks are located in Garages A, B, and C. The Paddock Area will be open from 12:00 p.m. to 06:30 p.m. on Sunday, April 10. From April 11 - 13, the Paddocks will be open each day from 8:00 a.m. - 06:30 p.m. and will close permanently at 06:30 p.m. on Wednesday, April 13.

Teams will be assigned an individual garage space in the Paddocks tent measuring approximately 6.06m x 7.24m (19' 11" x 23' 9") per vehicle. Each Team will receive 10 paddock passes to access their individual paddock space.

Garage assignments will be issued to the Teams at check-in.

Each garage will be equipped with:

- Electrical outlets (American sockets)
- 4 Chairs
- 1 Table
- Wi-Fi available at the venue



IMPORTANT INFORMATION ON-SITE

- Participant Information Desk: All questions on-site can be directed to the Participant Information desk, located in the Paddock Area.
- Screens around the Information Desk will show important information daily, including the track schedule.

Note: The Event Organisers reserve the right to make any changes in the venue. If you have any questions, please check at the Participant Information Desk.

PARTICIPANT CHECK-OUT

Please follow these steps for your Team's check-out:

1. Ensure all materials, vehicles and Team Members have vacated the Paddock Area by 6:30 p.m. on Wednesday, April 13. All Participants camping onsite and their belongings must be out of the Campsite by 9:00 a.m. on Thursday, April 14.
2. All Teams must return their vehicle transponders to the technical inspection registration desk by 4:00 p.m. on Wednesday, April 13.
3. Joulemeters must be returned to the Battery Electric Vehicle Tech Inspection Station by 4:00 p.m. Wednesday, April 13.
4. Hydrogen fuel tanks must be returned to the Hydrogen Tech Inspection Station by 4:00 p.m. Wednesday, April 13.
5. Telemetry equipment must be returned to the Telemetry Tech Inspection Station by 4:00 p.m. Wednesday, April 13.
6. Teams will be financially responsible for any Shell Eco-marathon equipment not returned.

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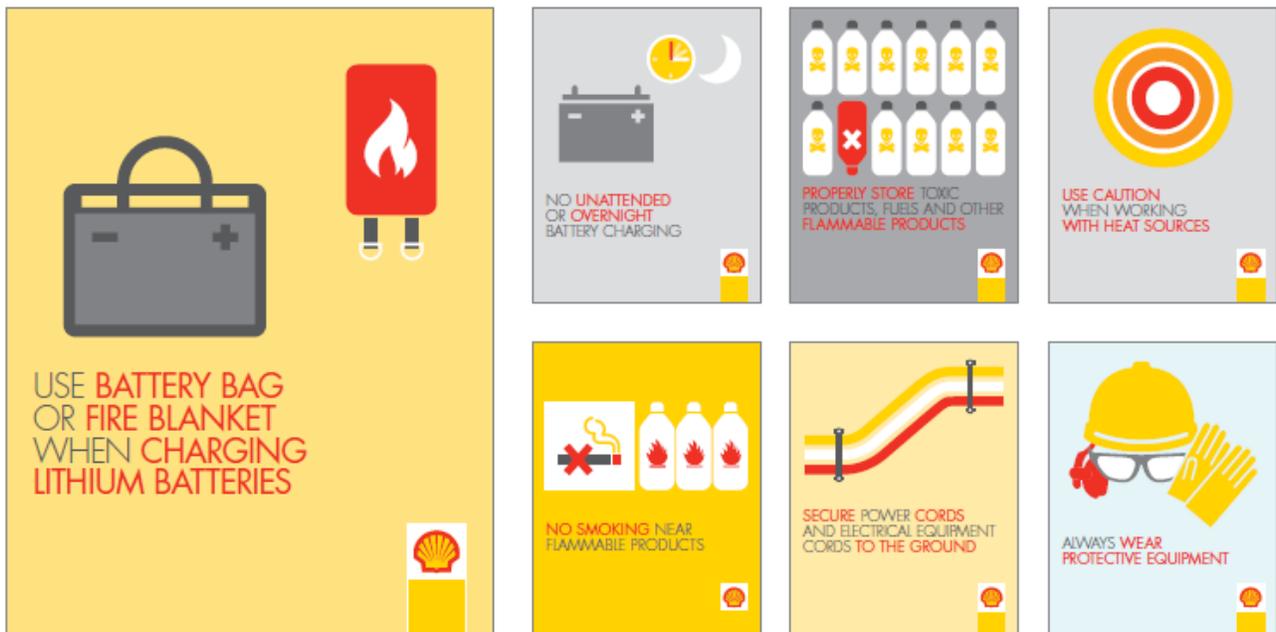
7. All commercially shipped vehicles and containers must leave Indianapolis Motor Speedway on Thursday, April 14. Be sure to arrange return shipment of your vehicle in advance of the competition. Teams must pack up their vehicles and leave the shipping paperwork with the freight manager. Remember this paperwork must be completed prior to your departure from Indianapolis.
8. Label all shipping crates with required return shipping information and complete the Dangerous Goods requirements (above). Air freighted crates will be physically inspected prior to departure.
9. The shipping companies can pick up the vehicles between 9:00 a.m. and 3:00 p.m. on Thursday, April 14.

5. SAFETY

Safety is a top priority for Shell. Please comply with the following instructions. They must be strictly followed.

IN THE PADDOCK AREA

- Individual safety protection materials (goggles, gloves, etc.) are mandatory while working on your vehicle.
- Use tools (drills, etc.) with extreme care. Ensure that you have read the operating instructions for any tools carefully and respect these instructions to the full extent. Should any of the tools break, return them to the manufacturer/authorised dealer – do not try to repair them yourself.
- Welding is forbidden within the Paddock area. All welding and metal grinding must be done in the designated welding area. Teams are not permitted to bring their own welding equipment with them.
- Exercise extreme caution when handling flammable products such as fuels and solvents. Naked flames are not allowed within the Paddock area.
- For more information, please check the Official Rules. Penalties for infraction can include your Team's disqualification.
- The Safety Team will be on hand to provide advice and guidance and to monitor compliance.



- Every day, mandatory briefings for all Drivers and Team Managers will take place at the time stipulated in the event schedule (location to be confirmed on-site). These briefings include a review of all safety issues that need to be observed on and around the track. Do not forget to have your wristband scanned to confirm your participation. Without this, you will not be allowed to access the track that day.

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For your safety, respect these rules during Shell Eco-marathon United States 2022:

| | |
|---|---|
|  | Make sure to get plenty of rest before traveling to Indianapolis. Take turns driving and avoid distractions while on the road. |
|  | In case of alarm (siren, loudspeaker), evacuate the area. Go to the nearest exit of the Paddocks or the track. Do not return until it is announced that it is safe to do so. |
|  | 24-hour ambulance service will be available in front of the Medical Center beginning at 12 p.m. on April 10 and staffed until 9 a.m. on April 14. In case of an incident or accident, call the medical support number at +1 917-912-3022 OR 911. |
|  | Never walk on the track (except during the track walk around), on the safety lane or in restricted areas. |
|  | Do not smoke in the paddocks, near the student garages or throughout the venue. Smoking is only permitted in the designated areas at Indianapolis Motor Speedway. |
|  | Beware of moving vehicles (Prototypes, Urban Concepts, forklift engines, service vehicles, etc.) |
|  | Pay attention to pedestrians at all times when moving or driving vehicles. Driving is only permitted on designated roads. |
|  | Any questions? Please visit the registration desk inside of Indianapolis Motor Speedway. |

THE ON-SITE EMERGENCY NUMBER IS +1 917-912-3022 OR 911.

FIRST AID

- 24-hour ambulance service will be available in front of the Medical Center beginning at 12 p.m. on April 10 and staffed until 9 a.m. on April 14.
- The Team Manager takes responsibility for his/her Team Members:
 - Contact person for the hospital and the First Aid Center
 - Supervisor at the hospital
 - Supervisor for bringing the Team Member back to Indianapolis Motor Speedway

COVID-19

We are continually monitoring the COVID-19 Situation. Controls will be in place on site which are appropriate to the risks in the local area **at the time of the event**, but teams should come prepared to follow the site rules which may include masking and social distancing.

6. COMPETITION

THE TRACK

For the attempt to be valid, a vehicle must complete 4 laps in a maximum time of 40 minutes for a total distance of 10 miles (16 km). The time requirement for Prototype and Urban Concept vehicles is the same.

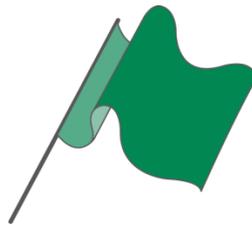
Note: the distance and time is subject to change based on the completed track configuration. Teams will be updated during the driver's briefings.

FLAGS ON THE TRACK



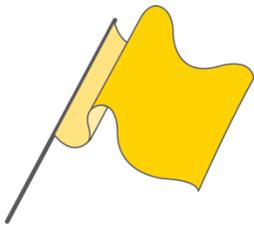
CHECKERED FLAG

End of race, arrival at finish line



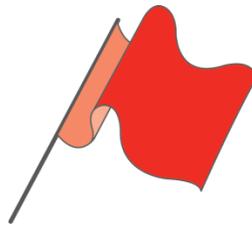
GREEN FLAG

Track access is authorized



YELLOW FLAG

Danger on track
No passing allowed



RED FLAG

Mandatory stop under the orders of
race management

TOWING OF VEHICLES

In the event of a breakdown Drivers shall:

- If possible, clear the track by steering your vehicle to the left. Track marshals will be available to help you move your vehicle if unable to steer to the left. The marshals will transport the vehicle to an off-track area where your Team can collect the vehicle.
- There will be a designated drop-off point for all towed vehicles. Teams can retrieve their vehicle there. The drop-off area will be identified during the Driver's Briefing Meetings. Otherwise, you and your Team will need to bring your vehicle back to the Paddock area by your own means.

7. TENTATIVE EVENT SCHEDULE

The final schedule for the day will be confirmed every morning during the mandatory Technical briefing. The Organisers reserve the right to change this schedule.

SUNDAY, APRIL 10, 2022

| | |
|-------------------------|----------------------------------|
| 12:00 p.m. | Campsite opens |
| 12:00 p.m. - 05:00 p.m. | Participant Check-in open |
| 12:00 p.m. - 06:30 p.m. | Paddock Area open |
| 06:00 p.m. - 07:00 p.m. | Opening ceremony and Group photo |

MONDAY, APRIL 11, 2022

| | |
|-------------------------|---|
| 08:00 a.m. - 06:30 p.m. | Paddock Area open |
| 08:00 a.m. - 12:00 p.m. | Participant Check-in open |
| 08:00 a.m. - 06:00 p.m. | Technical Inspection open |
| 09:00 a.m. - 11:00 p.m. | Track Walk |
| 01:00 p.m. - 05:00 p.m. | Participant Information Desk open |
| 01:00 p.m. - 01:45 p.m. | Mandatory Technical Briefing for Teams Managers and Drivers |
| 02:00 p.m. - 04:00 p.m. | Track open for Prototype Practice Only |
| 04:00 p.m. - 06:00 p.m. | Track open for Urban Concept Practice Only |

TUESDAY, APRIL 12, 2022

| | |
|-------------------------|---|
| 08:00 a.m. - 6:30 p.m. | Paddock Area open |
| 08:00 a.m. - 08:30 a.m. | Mandatory Technical Briefing for Teams Managers and Drivers |
| 08:00 a.m. - 05:00 p.m. | Participant Information Desk open |
| 08:00 a.m. - 12:00 p.m. | Technical Inspection open |
| 09:00 a.m. - 10:30 a.m. | Track open for Urban Concept Practice Only |
| 10:30 a.m. - 12:00 p.m. | Track open for Prototype Practice Only |
| 12:00 p.m. | Technical Inspection permanently closed |
| 01:30 p.m. - 04:30 p.m. | Urban Concept Competition |
| 04:30 p.m. - 06:00 p.m. | Prototype Competition |

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WEDNESDAY, APRIL 13, 2022

| | |
|-------------------------|---|
| 08:00 a.m. - 06:30 p.m. | Paddock Area open |
| 08:00 a.m. - 08:30 a.m. | Mandatory Technical briefing for Teams Managers and Drivers |
| 08:00 a.m. - 03:00 p.m. | Participant Information Desk open |
| 09:00 a.m. - 10:30 a.m. | Urban Concept Competition |
| 10:30 a.m. - 01:00 p.m. | Prototype Competition |
| 01:30 p.m. - 02:00 p.m. | Regional Championship Practice Runs |
| 02:00 p.m. - 03:30 p.m. | Prototype Competition |
| 04:00 p.m. - 04:30 p.m. | Regional Championship Final Competition |
| 05:00 p.m. - 06:00 p.m. | Awards Ceremony |
| 06:30 p.m. | Paddock Area permanently closed |

THURSDAY, APRIL 14, 2022

| | |
|------------|-----------------------------|
| 09:00 a.m. | Campsite permanently closed |
|------------|-----------------------------|

8. AFTER THE COMPETITION

AWARD PAYMENTS

The Event Organisers will use the bank details provided in Phase 3 registration in order to arrange payment for the winning Teams following the Event.

RESULT CERTIFICATES

Teams will be able to download their Result Certificates in the Registration system in the week following the competition. Teams who have not passed Technical Inspection will NOT receive a certificate.

9. WHO'S WHO

The following table provides an overview of the Shell Eco-marathon United States 2022 Organisers and their roles and responsibilities.

| WHO'S WHO | | DETAILED RESPONSIBILITIES |
|---|---|---------------------------|
| Student Liaison Priscila Gerhard  | <ul style="list-style-type: none"> ■ Arrival to departure care ■ Contact for any questions (at the Student Information Desk in the Paddock area) | |
| Technical Director Gilles Vanier  | <ul style="list-style-type: none"> ■ Oversee the entire technical operation for Shell Eco-marathon United States | |
| Safety Kirsteen Meldrum  | <ul style="list-style-type: none"> ■ Accountable for event Safety & Risk Management ■ Ensure enforcement of Safety Rules (e.g. on/off track, campground & student paddock area) ■ Point of contact for Safety-Related concerns/questions | |
| Race Director Rob Johnson  | <ul style="list-style-type: none"> ■ Ensure safety on track and on start and finish area ■ Ensure respect of the on-track rules for fair competition ■ Manage the rescue vehicle on track ■ Oversee entire Track operation | |

10. USEFUL INFORMATION

MAP OF THE VENUE



DO-IT-YOURSELF STORE

| DISTANCE FROM INDIANAPOLIS MOTOR SPEEDWAY | NAME AND ADDRESS |
|---|---|
| 1.5 miles | Advance Auto Parts 5636 Crawfordsville Rd. Speedway, IN 46224 |