

# FORMULA SAE®

Drivers Meeting for Fuel, Tilt,  
Noise, Brake, and Practice

May 10, 2018

Michigan International Speedway

# General Announcements

- Hot area appropriate behavior and dress
  - Long Pants, closed toe shoes, no running
- Number of team members allowed in hot area
  - 4 with dynamic pass
- How to identify event Captains
  - Pink Vest
- Weather
  - track condition and tire requirements
  - emergency locations
  - announcements, tunnels

# Event Layout 2018



# SCCA/SAFETY



SCCA Liaisons:

John Lisiecki

Ed Arthur

Mike McClintock

Mike Nienhuis

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**SAE**®

# FUEL STATION

Thursday

8:30am – 5:00pm

Friday

8:00am – 5:00pm

Saturday

7:30am – 5:00pm

Captain: Herb Seubert

Co - Captain: Rob Egenolf

Fuel Station Committee Man: Mike Thodoroff

Economy Captain: Alba Colon

Co - Captain: Mark Scott

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# FUEL STATION

## Follow specific safety guidelines while in the fueling area:

- No vehicles will receive fuel before passing Tech
- Until vehicles pass Tilt and receive that sticker, teams must bring the Tech sheet for approval. After passing Tilt, that is no longer required.
- Vehicles in route to Tilt are allowed to be shaken, by the driver only, to free up any trapped air in the fuel system. After passing Tilt, shaking is no longer allowed.
- All engines must be off; cars are to be pushed to and from fueling.
- Only the vehicle push crew and the driver are allowed to enter the fueling station and all must have their dynamic passes to enter.
- Only the driver, fully dressed in all safety gear, with vehicle fire extinguisher in hand, is permitted in the area as fuel is dispensed.
- A Permanent line mark must be used to indicate the “full” level.

### NO TAPE

- Tank is to be filled to this level each time fuel is received.

2018 FSAE Fuel Station  
Overall Area, covering All Days  
Map 6 3-22-18



Exits to Dynamic Events  
(Practice, Noise, Skidpad,  
Autocross, Endurance)

Return from Endurance



 Fuel Fill Lines  
 Fuel Efficiency Assessment

Emergency Exit  
(cones)

Bicycle Racks

Bicycle Racks

Power Box

Tilt  
Canopy

T  
a  
b  
l  
e

Emergency  
Fuel Drain /  
Repair Area

FUEL STATION

Screener  
Canopy

Fuel Trailer

Fire Marshall

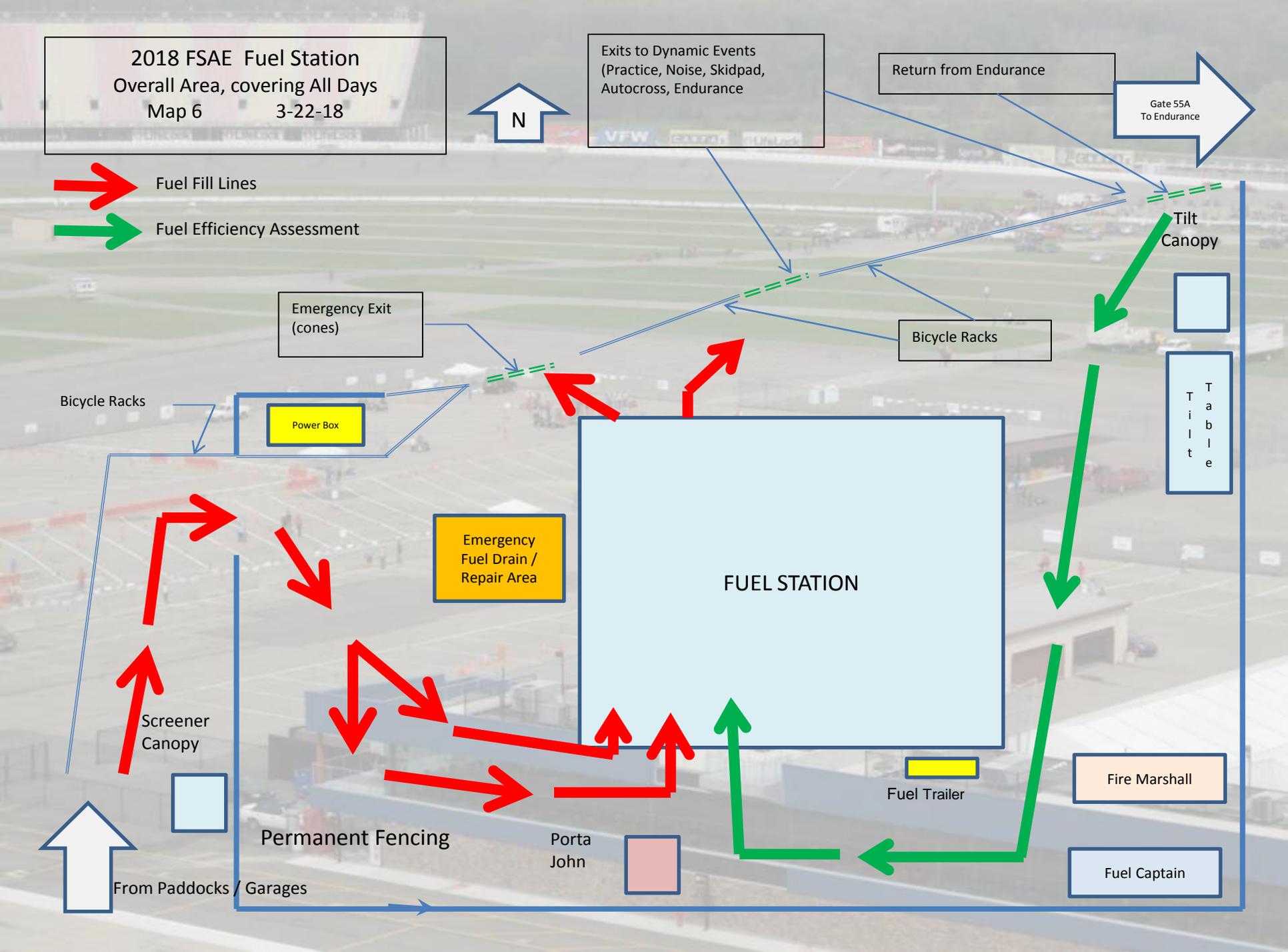
Permanent Fencing

Porta  
John

Fuel Captain



From Paddocks / Garages



# TILT TABLE

Thursday

9:00am – 5:00PM

Friday

8:00am – 5:30PM

Captain:

Alba Colon

Co - Captain:

Vince Bandurski

Co - Captain:

Mark Scott

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# TILT TABLE PROCESS

- The tallest driver aboard, fully suited, helmet buckled, gloves and all safety restraints secured.
- Engine off, push car on and off table. Care must be taken to avoid damage to the vehicle when pushed on and off the tilt table.
- Fuel fill side of vehicle is to be placed against the guard of the tilt table.
- Vehicle will be raised to 45 degrees, and checked for leaks
- Then the vehicle will be raised to 60 degrees to assure tire contact with table.
- Car will be asked to exit and if passed 2<sup>nd</sup> sticker will be applied prior to leaving area.

# NOISE TEST

Thursday

9:30am – 5:00PM

Friday

8:00am – 5:30PM

Captain:

Gary Newton

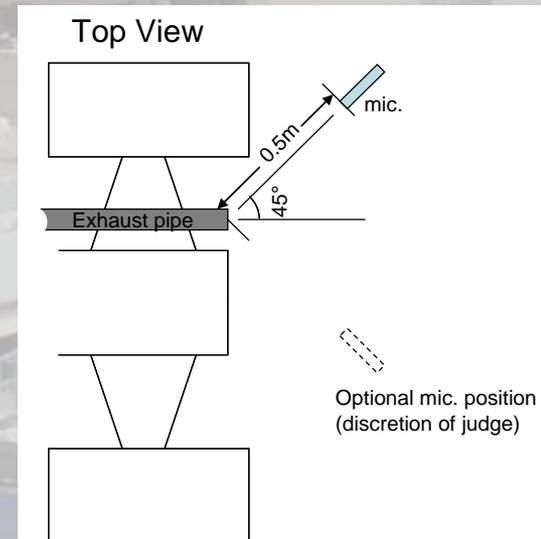
Co - Captain:

Greg McConville

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# NOISE TEST PROCESS

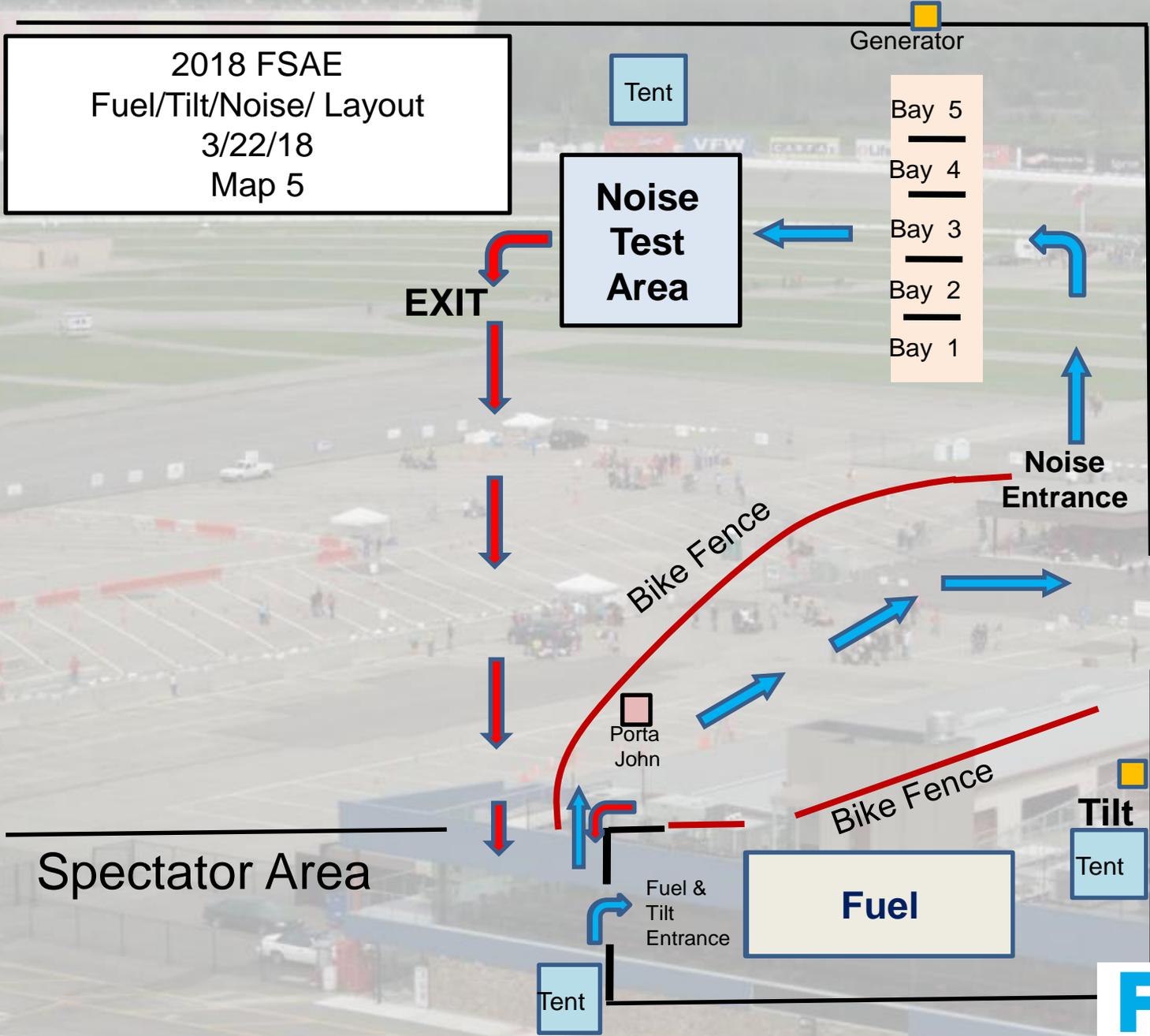
- Vehicles may be warmed up in the warming bays with a fully suited and belted driver.
- It is the teams responsibility to show the RPM via tachometer, computer or display. NO LIGHTS!
- When directed, the team will push the vehicle into the test station with the car in neutral.
- The team will hand their tech sheet (with engine information filled in) to the noise official who will confirm the designated test speed.
- Test speed is approximately  $\frac{3}{4}$  of the maximum engine speed as calculated by the SAE approved formula.
- The sound level meter will be positioned 0.5m from, and level with, the exhaust outlet at an angle of 45 degrees from the outlet and be un-obstructed.
- In the case of dual exhausts, both exhausts will be tested with the loudest one being the basis for judgment.



# NOISE TEST PROCESS

- Idle sound limit is 103 dBC. If team passes idle, driver will be asked to rev the engine to the target test speed.
- Maximum sound level shall not exceed 110dBC (margin of error +/- .5dBC).
- Official will check the kill switch with the engine at test speed.
- Meters are calibrated and will be checked and verified on-site on a regular basis!
- The reading of the meter by the official is final and not open for debate.
- Once Passed a 3<sup>rd</sup> tech sticker will be applied.

2018 FSAE  
Fuel/Tilt/Noise/ Layout  
3/22/18  
Map 5



Noise  
Test  
Area

- Bay 5
- Bay 4
- Bay 3
- Bay 2
- Bay 1

Noise  
Entrance

Bike Fence

Porta  
John

Bike Fence

Gate 50 to  
Brake and  
Dynamic  
area

Spectator Area

Fuel &  
Tilt  
Entrance

Fuel

Tilt  
Tent

Tent



# BRAKE TEST

SPONSORED BY AKEBONO

Thursday

10:00am – 5:00pm

Friday

8:00am – 5:30pm Sharp!

Captain:

Alba Colon

Co-Captain:

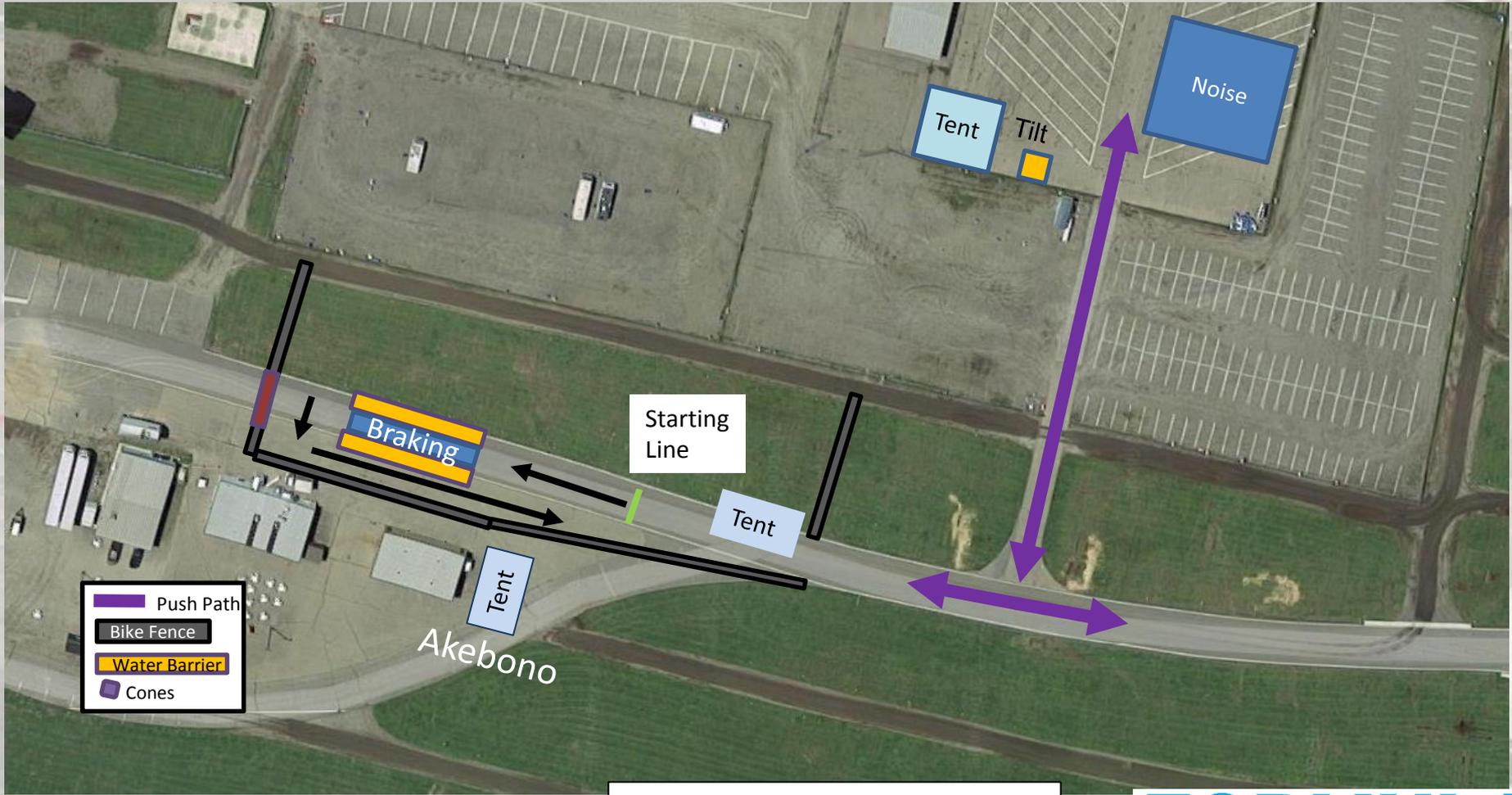
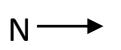
Mark Scott

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# Brake Test Procedure

- Driver must be wearing complete and proper safety equipment
- The driver will be instructed to the start line
- After starter checks the workers the driver directed to start the run
- With-in the brake box formed by water barriers, the vehicle must lock all 4 wheels and come to a complete stop with the engine running.
- Driver will then proceed thru course and follow directions from flaggers
- If vehicle needs to be tested again, you will be instructed to proceed back to start line and Stop, then re-run the test.
- If the vehicle passes the driver will be instructed to exit and turn engine OFF, the 4<sup>th</sup> sticker will be given to team and must be applied prior to leaving the area.
- The Tech sheet remains with the Brake Capitan as completion notification.

# Brake Layout – Infield Location



2018 FSAE  
Brake Layout  
Map 8 3/27/2018



# Practice Area

Sponsored by MAHLE

Thursday

Noon – 5:00pm

Friday

8:00am – 5:30pm

Saturday

8:00am – 3:00pm

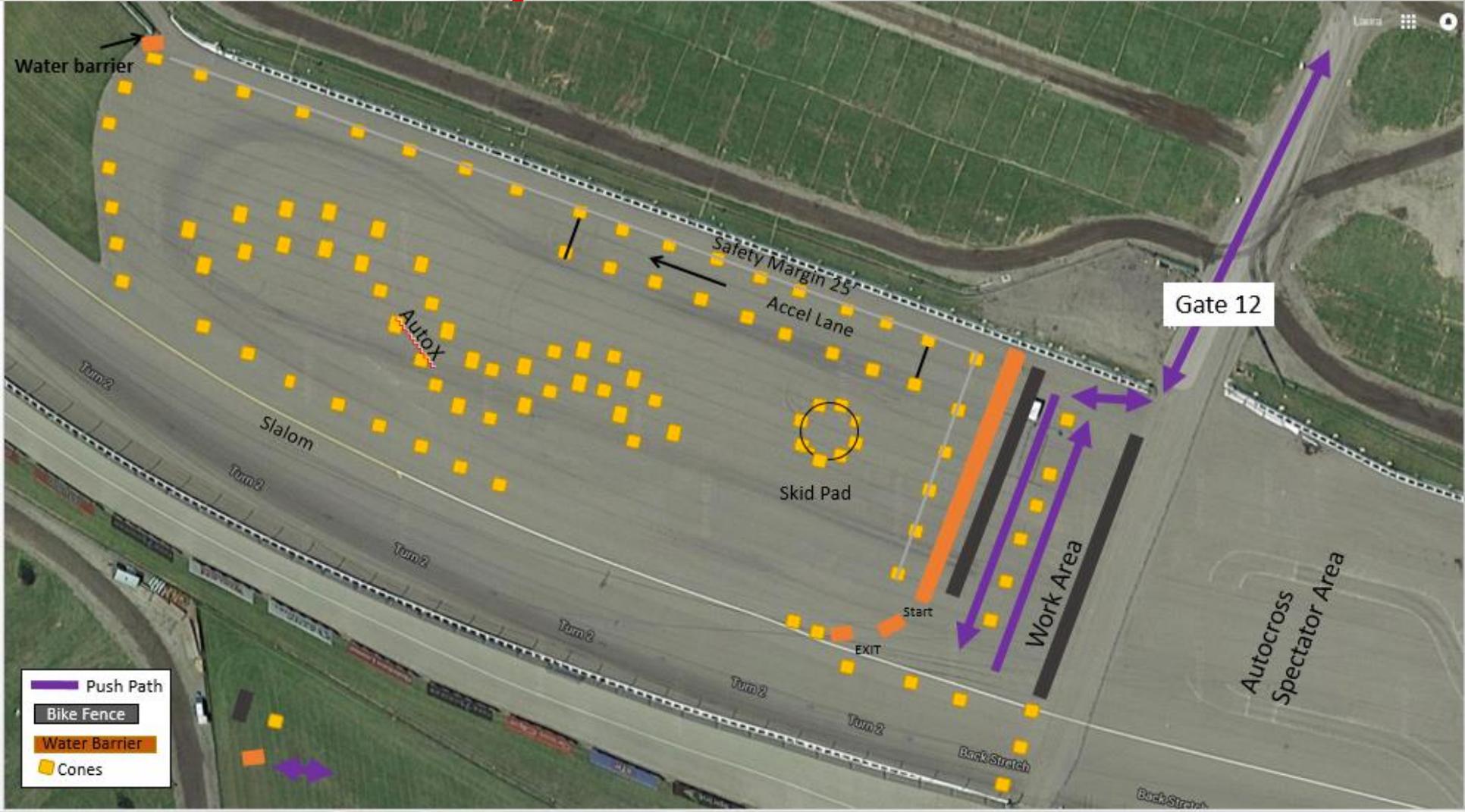
- Captain: Frank Putman
- Co-Captain: Gary Godula

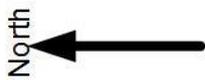
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# Safety guidelines for the Practice Tracks:

- Only one car at a time in the Practice Track area.
- The next car will not be permitted to enter the area until the last one has completed its exit.
- Three (3) volunteers (preferably four (4)) will be on hand to manage the operation of the Practice Track.
- Never place yourself in the line of travel of any car. Stay well away from the “hot” areas, always at a safe distance behind the barriers.
- Have fire extinguishers handy.
- Use brooms and oil-dry as needed to keep the Practice Track clean and dry.
- Any vehicle damage or contact must be reported to the area (station) manager(s). Additionally, remove the 1st tech sticker and report car number to tech tent so car can be re-evaluated after repair.
- Do not permit spectators to sit or lean on the hay bales/barriers surrounding the practice tracks.

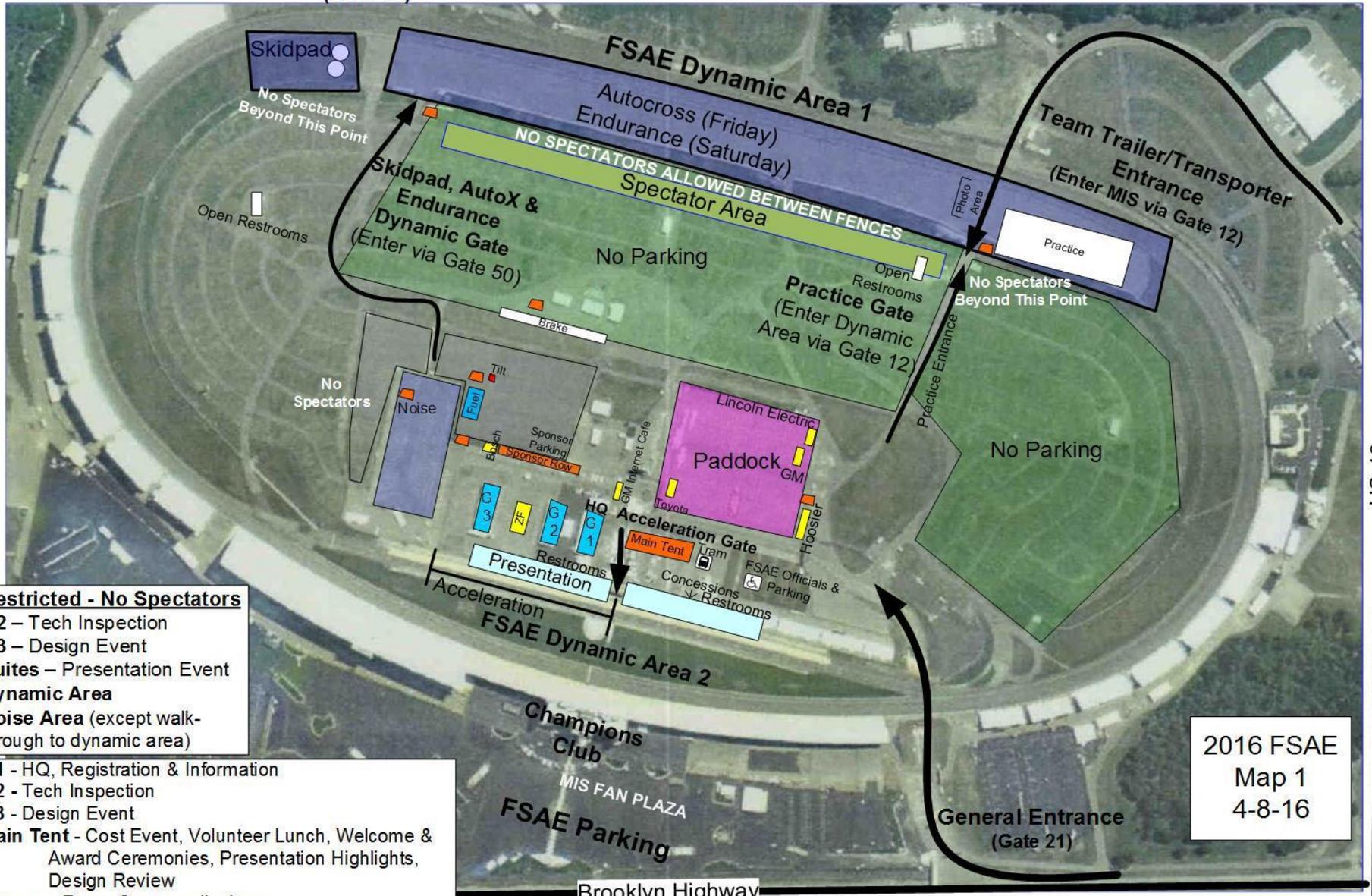
# Thurs/Fri Practice Area





Michigan International Speedway  
12626 US-12 Brooklyn, MI 49230

(Gate 50)



**Restricted - No Spectators**

- G2 – Tech Inspection
- G3 – Design Event
- Suites – Presentation Event
- Dynamic Area
- Noise Area (except walk-through to dynamic area)

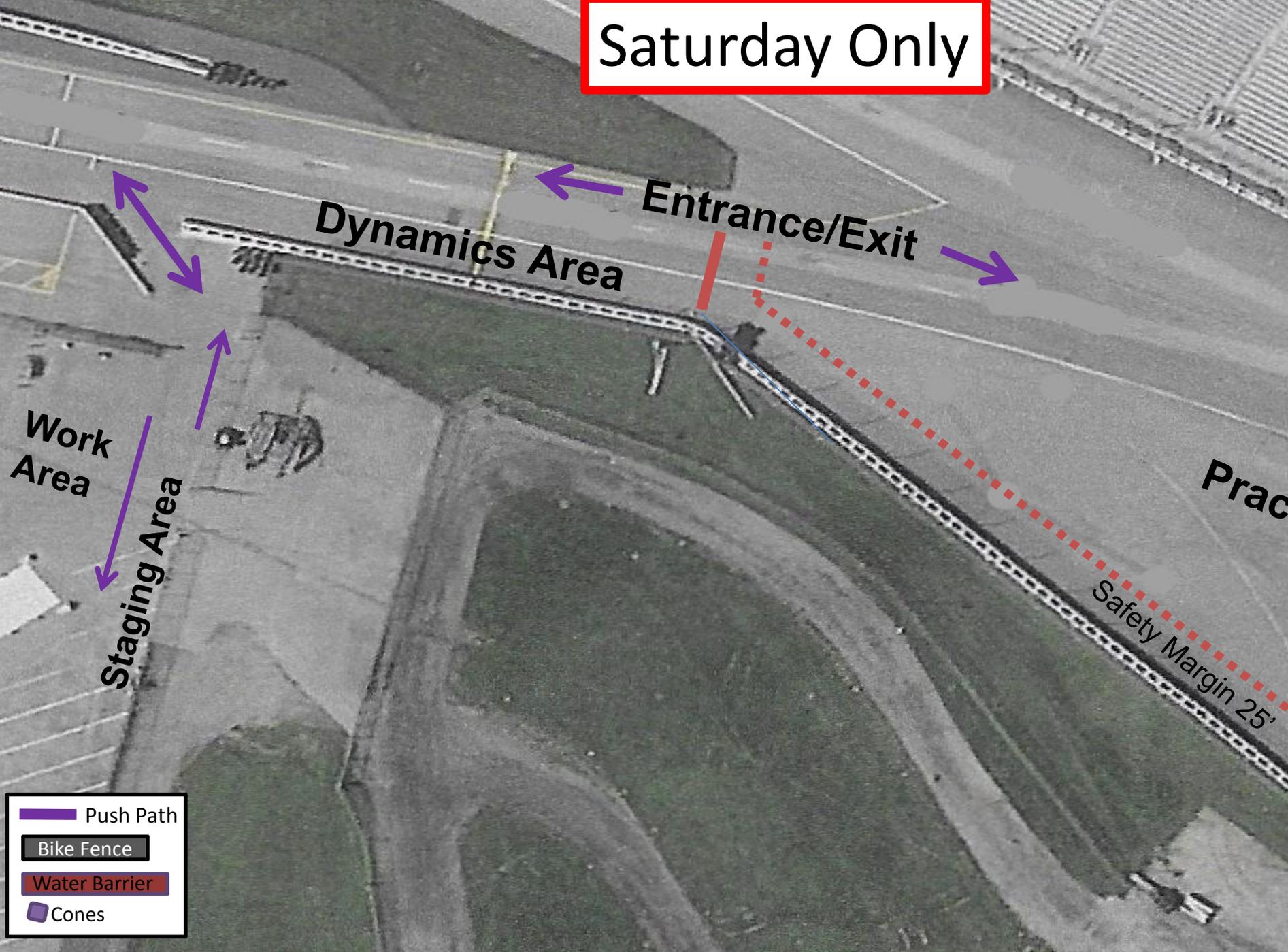
- G1 - HQ, Registration & Information
- G2 - Tech Inspection
- G3 - Design Event
- Main Tent - Cost Event, Volunteer Lunch, Welcome & Award Ceremonies, Presentation Highlights, Design Review
- Sponsor Row - Sponsor displays
- Suites - Presentation Event, Viewing area for Acceleration on top of Suites
- Support Services (GM Machine Trailer, Hoosier, Lincoln Electric)

2016 FSAE  
Map 1  
4-8-16

US-12

Brooklyn Highway

**Saturday Only**



-  Push Path
-  Bike Fence
-  Water Barrier
-  Cones