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ROBOBOAT

TeamTime #1

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Date

12 November 2025

Website

roboboat.org

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welcome to roboboat 2026

February 19-24, 2026
Nathan Benderson Park | Sarasota, Florida, USA

AGENDA

Edit your name to “Name | Team Name“
For example: Jane | University of RoboNation

COMPETITION OVERVIEW

EVENT DETAILS

TASK OVERVIEW

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Meet the Team

BILL
Technical Director

JULIANNA
Director of Program Operations

CHERI
Sr. Events Manager

ALICIA
Director of Comms & Marketing

DAVID
Product Manager

ALISON
Support & Registration Coordinator

LAVERNE
Competition Coordinator

YADIRA
Events Assistant

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2026 Theme

Technology in Action for Recovery and Relief.

Storm Response explores the power uncrewed systems play in recovery, resilience, and discovery in disaster relief efforts. Framed as an opportunity, not just to restore what was lost, but to rebuild smarter and reimagine the future; this season's challenges reflect the real-world role of robotics in helping communities respond to and recover from storms and other natural events. Through hands-on missions grounded in post-disaster scenarios, teams will apply technology with purpose – restoring harbor operations, assessing underwater infrastructure, supporting exploration, and unlocking new possibilities.

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Eligibility

Autonomous Surface Vehicle

Teams must build an Autonomous Surface Vehicle (ASV) to compete and may enter up to two vehicles in the competition.

**First-year teams are permitted to enter competition without a fully built ASV.*

Team Composition

Teams must be comprised of:

- 7% or more of full-time students, the majority of which are college or high school.
- 25% or less of alumni, industry, academic or government partners.

Student Team Members

The majority of full-time student team members must be college or high school students. Team may also include middle school students. Interdisciplinary teams are encouraged.

On-Site Team Members

Minimum of three (3) team members are required for safe operations on-site at the competition.

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Competition

Autonomy Challenge

Teams build an Autonomous Surface Vehicle (ASV) to showcase autonomous performance.

Design Documentation

Team prepare documentation showcasing ASV design and competition strategy:

- Team Website
- Technical Design Report
- Team Introduction Video
- Design Presentation (in-person)
- System Assessment (In-person)

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What's New in 2026

Capability Levels

- **Core:** Fundamental competencies for safe & effective baseline autonomous operation
- **Advanced:** Reflects growth in autonomy sophistication & real-world relevance
- **Disruptive:** Transformative & pushing boundary of autonomous systems.

Qualification Criteria

To qualify for Semi-Finals, ASV must complete:

- core capabilities of 2 tasks
- advanced capabilities of 2 tasks
- 2 tasks in sequence autonomously
- send heartbeat message

Multiple Boat Operations

As teams advance to Semi-Finals and Finals, multiple vessels may be operating in the course.

- Working Concept: Team's ASV interacts with a programmed USV "Patrol Boat, that will be operating in the mission field.

Reporting & Communications

ASV will send short updates with location and task status to the course server. Communications protocol is being defined and will be shared with teams as soon as available.

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PRELIMINARY SCHEDULE

JAN 2026	FEB 19 THU	FEB 20 FRI	FEB 21 SAT	FEB 22 SUN	FEB 23 MON	FEB 24 TUE
Pre-Competition Submission Deadlines	Team Orientation *(mandatory)*	Practice & Qualifications		Semi-Finals		Third-Chance & Finals
	Design Presentations / System Assessments					
	Overnight Pool Testing (@ Event Hotel)					Awards

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COMPETITION TIMELINE

October 1 - December 1:	Registration
December 5:	Cancellation 50% Refund Deadline
December 17, 7pm ET:	TeamTime #2
January 14:	Submission Deadline
February 19-24:	RoboBoat 2026

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HOTEL

Magnolia Pointe
Sarasota Hotel & Suites

5965 Brookhill Blvd, Sarasota, FL 34232

Rate: $229/night + taxes & fees

Reservation Cut-off Date: January 21, 2026

Call: 941-500-4700 to reserve

- **Overnight Pool Testing:**

Hours: 10pm - 2am, starting February 19

⚠️ **Problems? Contact Cheri Koch** ⚠️

SHIPPING

START PLANNING NOW!

- Packing List
- Crate Size/Composition
- Battery Shipping
- International Shipping - Carnet / Import Bond

FROM: School Name
Address
City, State, Zip
Country

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Ameniti Bay Sarasota Hotel & Suites
Attn: RoboBoat / School Name
5985 Brookhill Boulevard
Sarasota, Florida 34232

On-site Team POC Name: Phone:

TRAVEL CONSIDERATIONS

VISA Process

- Apply now!
- Explore the different types of visas: travel.state.gov.

Invitation Letter

- Teams may request invitations letters when officially registered and registration fee is paid.
- During Team Member Registration, each team member may request an invitation.

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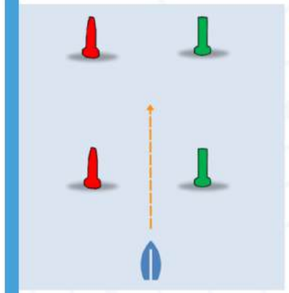
Task Overview

Communications & Reporting

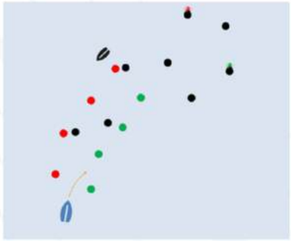
ASV reports on any given task: time stamp, lat/long locations, number or color of object.

Task 1: Evacuation Route



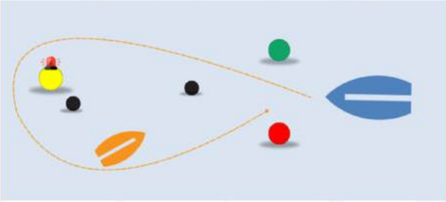
ASV safely transits through entrance and exit gates at start/end of run.

Task 2: Debris Clearance



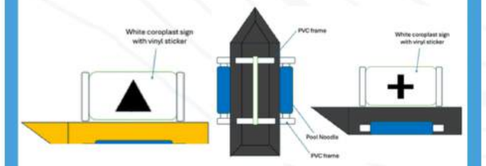
ASV navigates through channel to debris field, and scans for floating hazards.

Task 3: Emergency Response Sprint



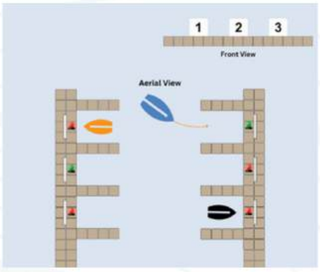
ASV sprints to the distress zone, circles the light buoy correctly, and exits back through the buoys.

Task 4: Supply Drop



ASV delivers water and racquetball supplies to stationary vessels throughout course.

Task 5: Navigate the Marina



ASV enters marina and docks in an unoccupied slip.

Task 6: Harbor Alert

ASV responds to emergency audio signal.

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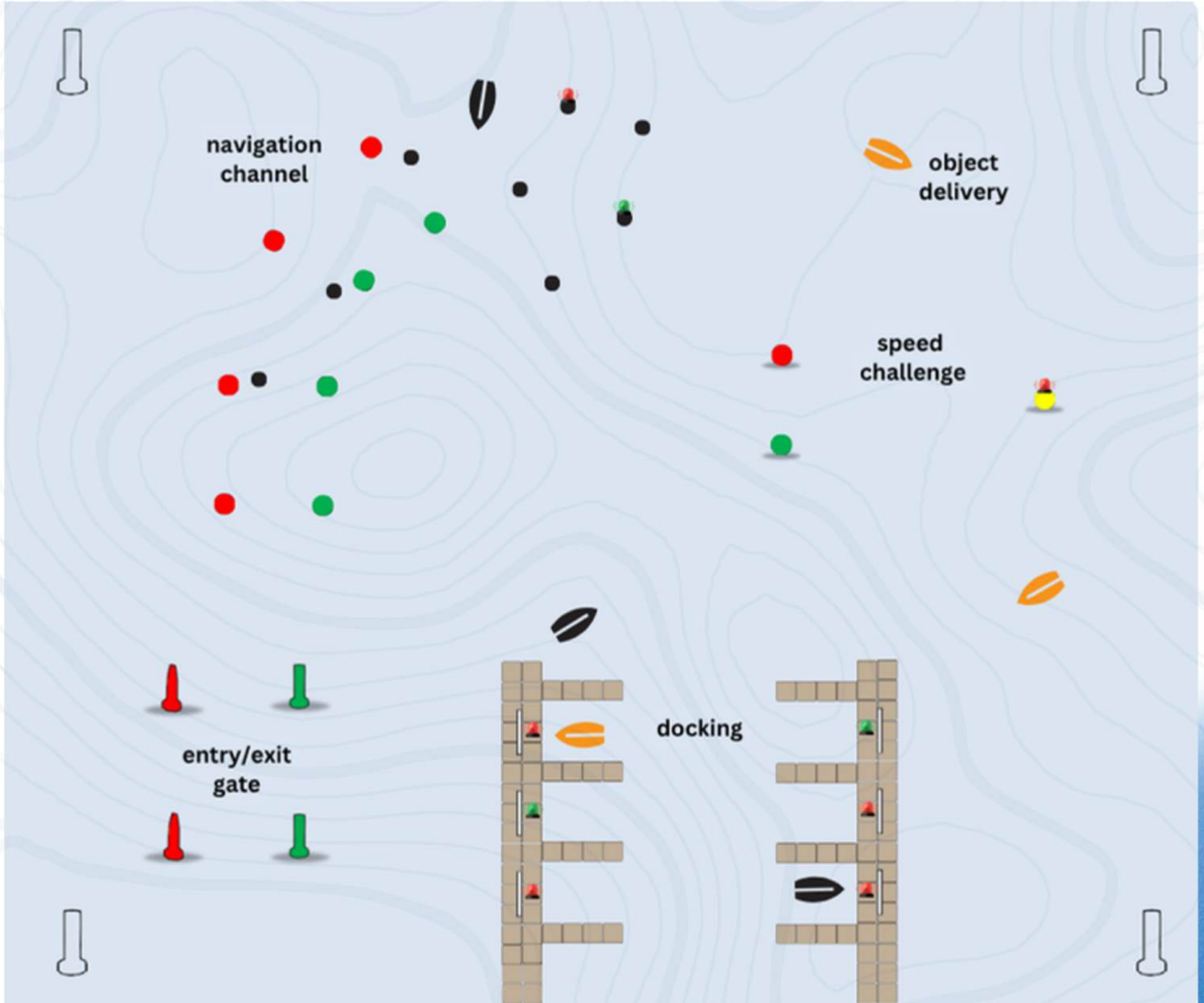
Course Layout



Task 1

Evacuation Route & Return

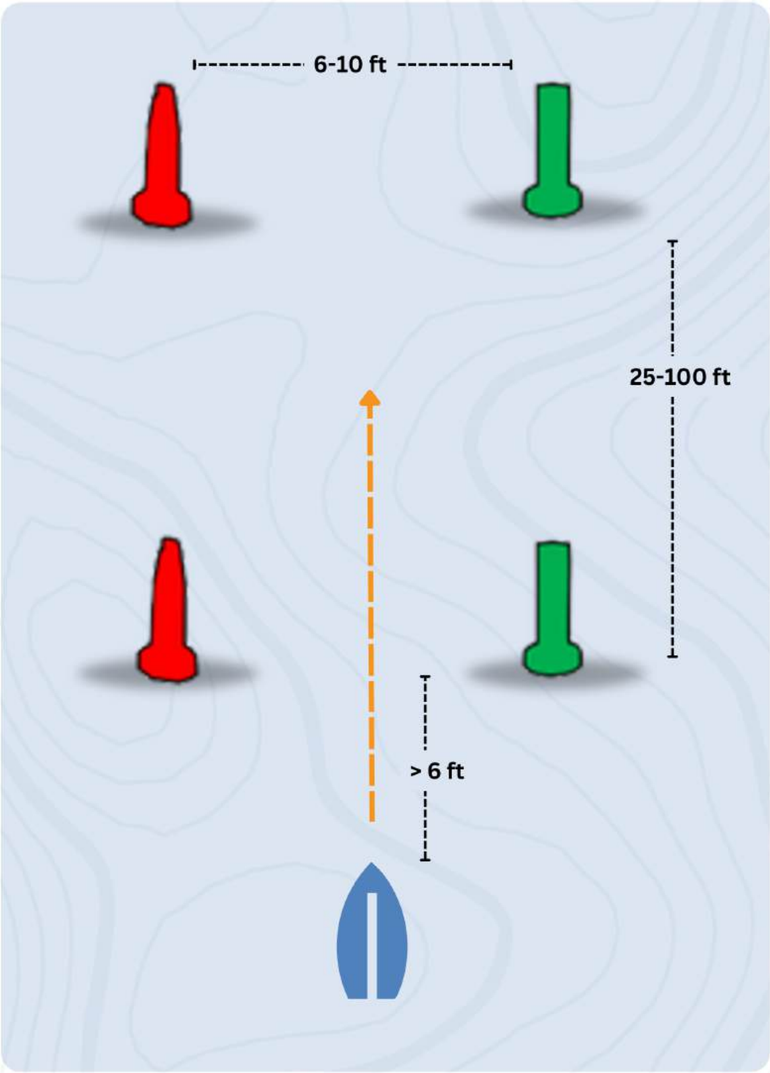
Entry & Exit Gates

- ASV passes through two sets of gates.
  - Gate: pair of red and green buoys
  - ASV starts autonomous navigation at a minimum of 6 ft. before the set of gates.

- Reporting: ASV reports on any given task: time stamp, lat/long locations, number or color of object.

Capability Levels:

- ***Core:*** Navigate and exit through two pairs of gates



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Task 2

Debris Clearance
Navigation Channel

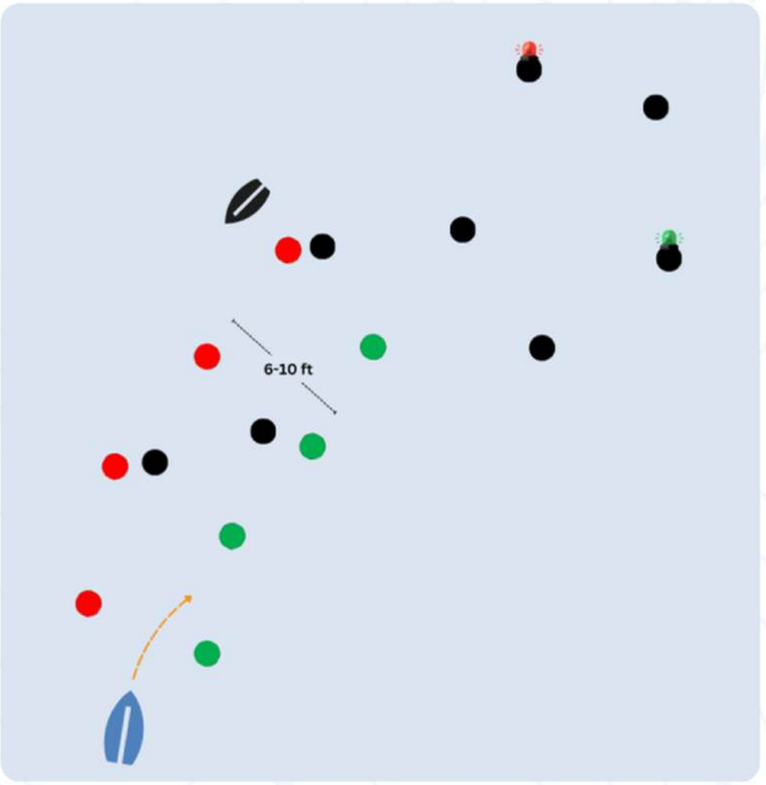
- ASV navigates through pathway of multiple gates, avoiding intermittent black obstacle buoys.
- ASV enters debris field and scans for:
  - Red light beacon = hazard to avoid and report location
  - Green light beacon = survivor to rescue, circle, and report
- Light beacons are bright LED lights inside clear or translucent tubes. This single colored light is visible 360° radially on a horizontal plane only.

Capability Levels:

- ***Core:*** Transit channel, enter debris field, avoid debris, and return through channel.
- ***Advanced:*** Detect and interact correctly with red or green debris.
- ***Disruptive:*** Reports location (lat/long) of all debris (lighted and non-lighted buoys).

Information on light beacons available in Team Handbook.

Gate = pair of red and green buoys



- Reporting: ASV reports on any given task: time stamp, lat/long locations, number or color of object.

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Task 3

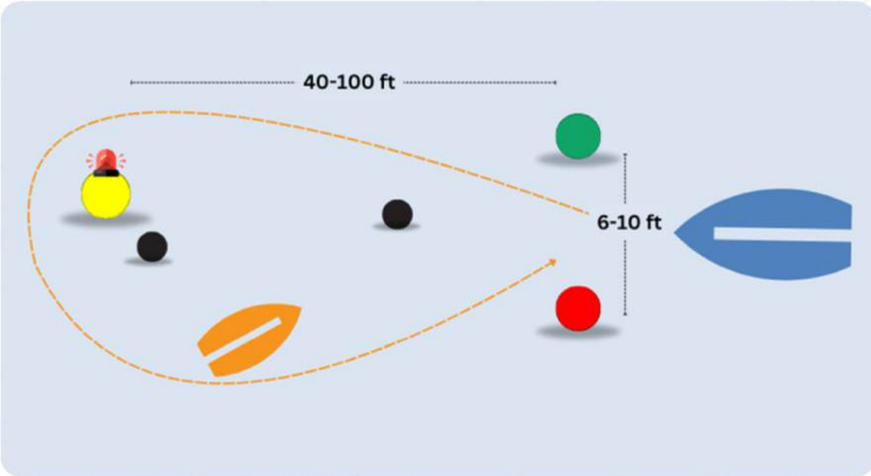
Emergency Response Sprint

Speed Challenge

- ASV passes through the gate buoys, maneuvers around the red or green light buoy (on yellow buoy), and exits through the same gate buoys, as quickly as possible.
  - Red light beacon = circle the buoy from the right
  - Green light beacon = circle the buoy from the left

- Light beacons are bright LED lights inside clear or translucent tubes. This single colored light is visible 360° radially on a horizontal plane only.

Gate = pair of red and green buoys



- Reporting: ASV reports on any given task: time stamp, lat/long locations, number or color of object.

Capability Levels:

- ***Core:*** Pass through gate, circle light buoy, and exit through gate.
- ***Advanced:*** Circle light beacon in correct direction indicated by color.
- ***Disruptive:*** Report color of light beacon and time of response.

Information on light beacons available in Team Handbook.

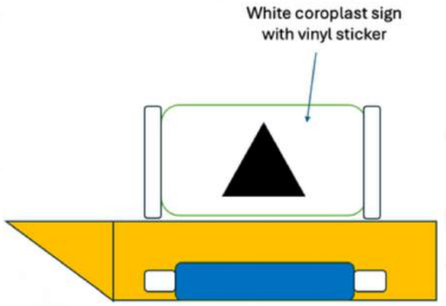
Task 4

Supply Drop
Object Delivery

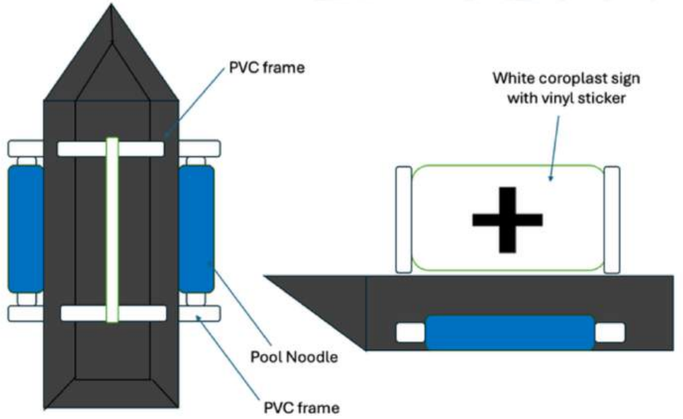
- ASV detects up to 3 orange boats that are anchored throughout the course, with a black triangle shape fixed to both sides of the boat. ASV delivers water on the triangle.

- ASV detects up to 3 black boats that are anchored throughout the course, with a black plus shape fixed to both sides of the boat. ASV delivers racquetball(s) to the boat.

Capability Levels:
- ***Core:*** Deliver water to orange vessel or ball to black vessel.
- ***Advanced:*** Deliver water to orange vessel and ball to black vessel.



Example Water Delivery Boat



- Reporting: ASV reports on any given task: time stamp, lat/long locations, number or color of object.

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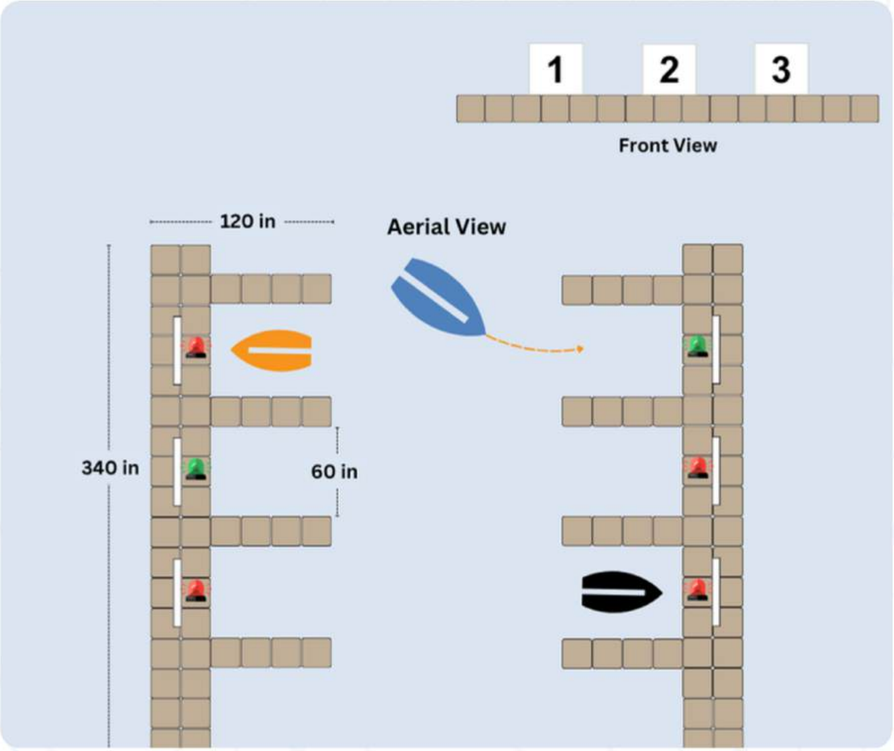
Task 5

Navigate the Marina

Docking

- ASV enters marina with three finger pier docks, docks in an available slip (indicated by green light beacon).
- ASV docks in the most desirable open dock, indicated by lowest number sign available.
- Light beacons are bright LED lights inside clear or translucent tubes. This single colored light is visible 360° radially on a horizontal plane only.



Capability Levels:

- ***Core:*** Dock in any unoccupied bay.
- ***Advanced:*** Dock in slip with green light beacon, signaling an available bay.
- ***Disruptive:*** Dock in slip with green light beacon and the lowest number sign, signaling an available bay.

- Reporting: ASV reports on any given task: time stamp, lat/long locations, number or color of object.

Information on light beacons available in Team Handbook.

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Task 6

Harbor Alert
Sound Signal

International Regulations for Preventing Collisions at Sea (COLREGs) list rules for using audible (whistle and horn) signals and lights for communicating their intentions with other vessels. There are no rules specifically for Maritime Autonomous Surface Ships (MASS), however these ships must comply with COLREGs.

- ASV detects audible signal and immediately abandons current task and:
  - One-blast signal = navigate to emergency response zone (Task 3)
  - Two-blast signal = return to marina dock (Task 5)
- Sound signal can alert at any point during the mission.
- Signals will vary by course, which could be 600Hz, 800Hz, 1000Hz, or 1200HZ (±5%)

Capability Levels:

- ***Core:*** Detect and classify audible signal (1 vs 2 blasts) and immediately abandon task, override behavior, and navigate safely to assigned zone/task.
- ***Advanced:*** Report confirmation of signal and execute optimized routing and collision avoidance to assigned zone/task.
- ***Disruptive:*** Coordinate response with another boat, report real-time status confirmation.

Reporting:

- ASV reports confirmation of sound signal
- ASV reports real-time status of response time and assigned zone

Information on sound signal available in Team Handbook.

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Coming Soon:

- Communications Protocol
- Scoring Breakdown

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Stay Updated

ALL THINGS ROBOBOAT

For all the latest information and updates for the competitions season, visit the RoboBoat website!

roboboat.org

DISCORD

Stay connected and updated with the RoboBoat Discord. Scan the QR code to get started!

JOIN TODAY!

- Scan the QR code
- Select the RoboBoat role
- Turn on notifications!

robonation.org/discord

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QUESTIONS?

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See you in Sarasota!

RoboNation is a 501c3 nonprofit organization whose mission is to provide a pathway of hands-on educational experiences that empower students to find innovative solutions to global challenges. Working together with the industry, research and educators, we have grown to include over nine student competitions and programs and engage more than 250,000 students per year.

For more information contact competitions@robonation.org