



September 12-17, 2022
Newport, Rhode Island

SAILING INSTRUCTIONS incorporating AMENDMENT 1 (in red)

1 RULES

- 1.1 The regatta will be governed by the rules as defined in *The Racing Rules of Sailing* (RRS) as changed by Appendix UF - Umpired Fleet Racing, 2022 Resolute Cup Edition, and posted on the 2022 Resolute Cup [website](#).
- 1.2 On-the-water umpiring will be used as detailed in Appendix UF – Umpired Fleet Racing, 2022 Resolute Cup Edition. Event umpire calls may be issued.
- 1.3 Sonar-type boats and RS21-type boats will be provided by the OA. SI Addendum A – Handling of Boats and SI Addendum B – Equipment List shall apply. Sonar class rules and RS21 class rules shall not apply.
- 1.4 The US Sailing Prescription to RRS 63.2 is deleted.
- 1.5 If there is a conflict between rules or regulations, other than RRS, the sailing instructions will prevail. This changes RRS 63.7.
- 1.6 All competing boats shall carry a handheld VHF radio for safety purposes and Race Committee communication.
- 1.7 When the race committee signal vessel displays flag “K” at or before the warning signal, spinnakers/gennakers shall not be used for that race.
- 1.8 RS21: When the race committee signal boat displays flag “J” at or before the warning signal, jibs shall not be lowered while racing.
- 1.9 The Protest Committee may apply discretionary penalties (“DP”), up to and including a DSQ, for breaches of any rules, including rules of Part 2 (When Boats Meet). This changes RRS 64.2.
- 1.10 **RS21: An extended bowsprit shall not be considered part of the boat for the purposes of (a) establishing an overlap, or (b) establishing right of way, unless the gennaker is set.**

2 COMMUNICATION: NOTICES, ANNOUNCEMENTS, VHF CHANNELS

- 2.1 Notices, including race documents, amendments and results, will be posted on the Official Notice Board located in the courtyard at the NYYC Sailing Center at Harbour Court and may also be posted on the event website at <https://nyyc.org/2022-resolute-cup>.
- 2.2 Any change to the sailing instructions will be posted before 0900 hours on the day it will take effect, except that any change to the schedule of races will be posted by 2000 hours on the day before it will take effect. Code flag “L” (Lima) will be flown to signify such posting.
- 2.3 The Race Committee will communicate with the fleet on VHF 77.

3 SIGNALS MADE ASHORE

- 3.1 Flag signals will be flown from the western yardarm of the flagpole at Harbour Court.
- 3.2 When flag AP is displayed ashore, “1 minute” is replaced with “not less than 60 minutes” in race signal “AP”. This changes RRS Race Signals.

4 SCHEDULE OF EVENTS

4.1	Date	Time	Event
	Monday, September 12	1300-1800	Registration and Weigh-in
		1300-1700	Optional Practice
		1800	Classification Protest Time limit
	Tuesday, September 13	0900-1000	Late Registration and Weigh-in
		1000	Competitors' Meeting (Mandatory for all competitors)
		1100-1700	Practice
		1800	Competitors' Meeting (Mandatory for skippers)
		1830-2000	Opening Reception
	Wednesday, September 14	0830	Morning Briefing (Mandatory for skippers)
		1030	First Warning Signal
	Thursday, September 15	0830	Morning Briefing (Mandatory for skippers)
		1030	First Warning Signal
	Friday, September 16	0830	Morning Briefing (Mandatory for skippers)
		1030	First Warning Signal
	Saturday, September 17	0830	Morning Briefing (Mandatory for skippers)
		1030	First Warning Signal
		1900-2300	Final Awards Banquet

4.2 There will be a mandatory Competitors' Meeting each race day morning at 0830 in the tent located on the lower lawn at Harbour Court. A representative from each team shall be present each day.

4.2 Multiple races are scheduled. The format is described in Addendum D – Format and Boat Assignments.

4.3 No warning for any race will be made after 1600 hrs on Saturday, September 17.

5 BOATS PROVIDED BY THE ORGANIZING AUTHORITY (OA)

5.1 Sonar-type boats and RS 21-type boats will be provided by New York Yacht Club for use by competing teams. The boats have been equalized in performance potential to the extent possible and organized into fleets. An alternate boat(s) may be substituted in case of a breakdown. Claims regarding the performance of the boats will not be grounds for a boat to request redress. This changes RRS 62.1(a).

5.2 All equipment shall be used as supplied and no changes, additions or subtractions shall be made other than those permitted by the sailing instructions or the OA. Replacement of broken or damaged gear may only be made with gear sanctioned by the OA.

5.3 Addendum A – Handling the Boats lists items and actions that are prohibited, permitted and mandatory.

5.4 Addendum B – Equipment List details all equipment that shall be onboard at all times.

6 CLASS FLAG

The RS 21-type fleet class flag is Numeral Pennant 1. The Sonar-type fleet class flag is Numeral Pennant 2.

7 RACING AREAS

The racing area will be on Narragansett Bay. The location of the rendezvous area will be announced at the Competitors' Meeting each day.

8 COURSES AND MARKS

The courses and marks to be used are described in SI Addendum C.

9 THE START

9.1 The starting line will be between a staff displaying an orange flag on the starboard end signal vessel and the course side of the port-end starting mark as described in SI Addendum C *or* a staff displaying an orange flag on the port end signal vessel.

9.2 A boat starting later than five (5) minutes after the starting signal will be scored DNS. This changes RRS A5.

9.3 The Race Committee will endeavor to hail boats observed to be OCS at the start on VHF 77. Failure of equipment, failure to hear a hail, delay in hailing or the order in which hails are given will not be grounds for a boat to request redress. This changes RRS 62.1(a).

10 CHANGE OF THE NEXT LEG OF THE COURSE

See Addendum C – Courses and Marks.

11 THE FINISH

The finishing line will be between a staff displaying a blue flag on a Race Committee boat and the course side of the finish mark as described in SI Addendum C.

12 REVOKE OF INVITATION

Participation in the regatta is by invitation. When the protest committee finds that a boat or team's competitor or support person has broken one or more rules in an incident afloat or ashore where there was either: 1) serious damage caused by reckless sailing or poor seamanship; 2) poor sportsmanship; or 3) misconduct as described in RRS 69.1(b), it shall make a report to the OA who may revoke that team's invitation and excuse the team from the regatta. The OA may also decide to take such action for this kind of conduct without such a report.

13 TIME LIMITS

13.1 The time limit for the first boat to sail the course and finish will be 60 minutes from the starting signal.

13.2 If no boat has passed their first windward mark 30 minutes after the starting signal, the race shall be abandoned.

13.3 Boats failing to finish within 20 minutes after the first boat sails the course and *finishes* will be scored Did Not Finish without a hearing. This changes RRS 35, A4 and A5.

14 PROTESTS AND REQUESTS FOR REDRESS

14.1 Red flags will be provided by the OA to each boat to be displayed when protesting another boat in accordance with rule UF3.1.

14.2 Other protests and requests for reopening or redress will be made in accordance with rule UF4.

14.3 Protests and requests for reopening or redress need not be in writing, but Hearing Request forms will be available from the Sailing Office in the NYYC Sailing Center or on the event website should a competitor wish to complete one for hearings held ashore.

14.4 The Protest Committee will attempt to post a list of hearings on the Official Notice Board no later than 30 minutes after the Race Committee Signal vessel has docked.

14.5 If protest hearings are held ashore, they will take place in the Jury Room at the NYYC Sailing Center. The Protest Committee will attempt to hear protests in the order of receipt. Representatives of boats who are parties to a hearing shall remain on call in the vicinity of the Jury Room.

14.6 Video and/or photographs taken from any support, spectator and/or coach vessel shall not be presented as evidence at protest hearings by a competitor or a witness. The Protest Committee may present, as evidence, publicly available photos or video. Data from any tracking system, if used, may only be presented as evidence by the Protest Committee. This changes RRS 63.6.

14.7 Breaches of SIs 16, 17, 18, 19, and A2.1(j) will not be grounds for a protest by a boat.

14.8 When the Protest Committee finds that a boat that is a party to a protest hearing has broken a rule, and as a result has caused catastrophic damage to the other boat involved in the incident (defined as a boat being unable to race the following day), in addition to other penalties, the OA may require that the team at fault give their boat to the team with the damaged boat as a replacement until the damaged boat has been fully repaired.

15 SCORING

15.1 Multiple races are scheduled.

15.2 In the Qualifying Series, a boat's series score shall be the total of her race scores excluding her worst score if five (5) or more races are completed. This changes RRS A2.

15.3 In the Gold Series and Silver Series, a boat's series score shall be the total of all of her race scores. No score will be excluded. This changes RRS A2.

15.4 Race scores from the Qualifying Series will not carry over to the Gold Series or Silver Series.

16 SAFETY REGULATIONS

A boat that retires from a race shall notify the Race Committee and/or the umpires as soon as possible.

17 REPLACEMENT OF CREW OR EQUIPMENT

- 17.1 Teams shall consist of three or four crew members, including the skipper, all of whom shall sail the entire regatta. There must be at least one male and one female on the crew.
- 17.2 Prior to 1800 on Tuesday, September 13, a substitution to the submitted Crew List may only be made with the permission of the Organizing Authority. After that time, a substitution may only be made with written permission of the Protest Committee.
- 17.3 Breakdown Flag: Before the warning signal of a race, a boat may display a yellow breakdown flag provided by the OA to signal a breakdown or damage to the boat, her sails or injury to her crew and request a delay to the next start. She shall proceed as soon as possible to a position close to leeward of the Race Committee signal vessel and remain there, unless otherwise directed. The time allowed for repairs, if any, shall be at the discretion of the Race Committee.
- 17.4 After the warning signal, a race may be postponed or abandoned at the discretion of the Race Committee if the breakdown flag was displayed as required by SI 17.3.
- 17.5 Except when RRS 62.1(b) applies, failure to effect repairs in the time allowed or breakdowns after the warning signal shall not be grounds for a boat to request redress. This changes RRS 62.

18 SUPPORT VESSELS AND SUPPORT PERSONS

- 18.1 The following limitations and restrictions apply to support persons and any coach/support vessels, including spectator vessels associated with a team:
- Except as directed by the OA, competitors shall have no communication with, be tied to or transfer provisions or equipment to and from any support person or vessel from the time the boat leaves the dock or mooring each day until racing has been concluded for the day for that team.
 - Support and spectator vessels shall not approach closer than 100 meters to any vessel that is racing. In addition, a support vessel shall stay at least 100 meters outside any layline and shall not be located directly above any windward marks or the finishing line.
 - If in the starting area, support vessels shall leave the racing and starting areas prior to the warning signal and may only station themselves outside of the starboard end of the starting line, but no closer than 100 meters to the Race Committee signal vessel.
- 18.2 All support persons and coach/support vessels must register with the OA prior to the first day of racing. Coach/support vessels shall display a flag or burgee (a minimum of 12" on the hoist) that they have supplied identifying the Yacht Club, Sailing Organization or Entity with which they are associated, along with an identifying flag issued by the OA, at all times while they are on the water.
- 18.3 Support/Coach boats will not be permitted to dock at the NYYC docks except temporarily. Dockage may be available at the Alofsin Piers at Fort Adams and arrangements shall be made directly with Sail Newport.
- 18.4 The use of drones by support persons, spectators or competitors is prohibited.

19 SAFETY REGULATIONS

- 19.1 **Restricted Channels:** Competitors are reminded that Narragansett Bay and its approaches are considered restricted channels for commercial traffic and other vessels restricted in their ability to maneuver. Competitors must comply with the government right-of-way rules when in proximity to commercial or privileged marine traffic.
- 19.2 **Newport Security Zone:** In the event there is racing north of the Newport Bridge, competitors should be aware of heightened security around the Navy base in Newport just to the north of the Newport Jamestown Bridge. The area may be defined by a series of white buoys marking the Newport Security Zone along the coast of the Naval Facilities from Coasters Harbor to the breakwater at the north end of Coddington Cove and the line defined by the buoys is an obstruction. Yachts shall not enter this area. A Navy patrol boat monitors the area and vessels navigating in the Exclusionary Zone may face action by Coast Guard and Naval authorities.
- 19.3 **Additional Restricted Areas:** There may be additional restricted areas due to Navy activity, shipping or fishing operations that may be designated as obstructions and described in an amendment to the sailing instructions.

20 PRIZES

Prizes will be awarded as stated in the Notice of Race.

21 NOTES

- 21.1 The OA may provide tracking devices. Details will be provided at the Competitors' Meeting.
- 21.2 For further information, please visit the website at <https://nyyc.org/2022-resolute-cup> or contact the New York Yacht Club Sailing Office at sailingoffice@nyyc.org.

NEW YORK YACHT CLUB OFFICERS

Paul M. Zabetakis, MD, Commodore, NYYC
L Jay Cross, Vice Commodore, NYYC
Clare G. Harrington, Rear Commodore, NYYC
Benjamin E. Kinney, Chairman, NYYC Sailing Committee

EVENT CHAIR

Jack Cummiskey, Event Chair

RACE COMMITTEE

Roger W. Fortier, Jr., Principal Race Officer
Ray Wulff, Deputy Race Officer

Ace Bailey
Charles Goodrich
Carolyn Grant
Dick Gumpert
Joey Moffitt
Jonathan Nye

Cathy Peacock
Kurt Schlichting
Mary Schlichting
Sam Vineyard
Forrest Williams

PROTEST COMMITTEE/UMPIRES

Brad Dellenbaugh, Chief Umpire

Shannon Bush
Carrie Greene
Kevin Hawkins
Timothea S. Larr
Rick Myers

Patricia O'Donnell
John Pratt
Vicki Sodaro
Peter Wilson

© Copyright New York Yacht Club 2022. All Rights Reserved.

New York Yacht Club; NYYC; Harbour Court, club burgee; certain other logos and marks are trademarks or registered trademarks of the New York Yacht Club in the United States and other countries. All Rights Reserved. Use is prohibited without written permission of the Secretary of the New York Yacht Club.

SI ADDENDUM A - HANDLING THE BOATS

A1 GENERAL

While all reasonable steps are taken to equalize, variations in the boats will not be grounds for redress. This changes RRS 62.

A2 PROHIBITED ITEMS AND ACTIONS

Except in an emergency or in order to prevent damage or injury, or when directed otherwise by an umpire, the following are prohibited:

A2.1 Actions subject to umpire-initiated penalties during a race:

- a) Moving the mast blocks.
- b) Adjusting or altering the tension of standing rigging, excluding the backstay.
- c) The use of electronic instruments other than a VHF radio, watches and cellphones. Cellphones may only be used when not racing and only for personal, non-sailing-related calls or texting. Any sailing-related apps may passively collect data while racing, but any data or interpretation may not be reviewed until ashore after racing.
- d) **Sonar**: Using the spinnaker pole to wing out the foresail.
- e) **Sonar**: The use of the shrouds (including any inner shrouds) to facilitate tacking or gybing, or to aid the projection of a crew member outboard is prohibited.
- f) **Sonar**: Sitting outboard (including legs) of the toe rail is prohibited, but the upper body may lean outboard. Using lazy sheets and control lines for the purpose of hiking normally while seated is permitted.
- g) **RS21**: Except for momentary sail handling and/or repair needs, crew shall remain aft of the mast while on deck.
- h) **RS21**: Crew shall not stand or lean out over the cockpit safety lines or stern rails to promote roll tacking, roll gybing or to increase hiking leverage, or for any other reason, other than for temporary needs to make repairs or correct problems.
- i) Radio transmission, except to report damage or in response to a request from the RC.
- j) **RS21**: The bowsprit shall always be fully retracted except when the gennaker is being set, is set, or is being retrieved, and shall be retracted at the first reasonable opportunity after the retrieval.

A2.2 Actions subject to protest by the Protest Committee or Race Committee:

- a) Any additions, omissions or alterations to the equipment supplied.
- b) The replacement of any equipment without the sanction of the RC.
- c) Sailing the boat in a manner that it is reasonable to predict that significant further damage would result.
- d) Moving equipment from its normal stowage position except when being used.
- e) Boarding a boat without prior permission.
- f) Taking a boat from its berth or mooring without having paid the required damage deposit or having permission from the RC, or, on race days, while “AP” is displayed ashore.
- g) Hauling out a boat or cleaning surfaces below the waterline.
- h) Attaching lines to the fabric of spinnakers.
- i) Marking directly on the hull or deck with permanent ink.
- j) Perforating sails, even to attach telltales.
- k) The use of any equipment for a purpose other than that intended or specifically permitted.

A2.3 Using a compass, other than a handheld compass. The handheld compass shall not be affixed to the boat or rigging. A handheld compass is permitted to be electronic, but shall have no tactical capability. Tacktick compasses, and similar, in addition to high-sensitivity GPS devices such as the “Speed-puck” or “Velociteck” are specifically prohibited. Note that this is not an exclusive list of devices that are not permitted.

A2.4 Place a crew below decks (Sonar) or crew head and shoulders below **deck** (RS21) while racing except for a medical emergency or while moving boat equipment or personal gear.

A3 PERMITTED ITEMS AND ACTIONS

The following are permitted:

A3.1 Taking on board the following equipment:

- (a) basic hand tools
- (b) adhesive tape or Velcro tape but not duct tape
- (c) line (elastic or otherwise of 4 mm diameter or less)
- (d) marking pens
- (e) telltale material
- (f) watch, timers and hand-held compass (see restrictions in A2.1(c) and A2.3)
- (g) shackles, plastic clips, cotter pints/ring dings and clevis pins
- (h) spare flags
- (i) VHF radio (see restrictions in A2.1(i))

A3.2 Using the items in 3.1 to:

- (a) prevent fouling of lines, sails and sheets or to secure the spinnaker halyard
- (b) attach telltales
- (c) prevent sails being damaged or falling overboard
- (d) mark control settings (adhesive tape only)
- (e) make minor repairs and permitted adjustments
- (f) make signals as per Appendix UF

A3.3 Fixing a spinnaker sheet catcher at the bow, providing that it does not extend the length of the boat more than 100 mm and does not require any repair or maintenance after removal.

A3.4 Changing the number of mainsheet or jib sheet purchases.

A4 MANDATORY ITEMS AND ACTIONS

The following are mandatory:

A4.1 The completion of the online damage report before leaving the boat, even if no damage or loss is recorded. Reports shall include any evidence of matters that could cause damage or disadvantage to the boat in future races.

A4.2 At the end of each sailing day:

- (a) rolling, bagging and placement of the sails as directed;
- (b) leaving the boat in the same state of cleanliness as when first boarded that day;
- (c) releasing backstay tension.

A4.3 At the end of the final day for a particular boat, cleaning the boat (cabin and decks), removing all trash and recycling and removing all tape and marks.

A4.4 Any request to alter, in any way, the equipment on a boat shall be in writing and worded to permit a yes/no answer.

A4.5 Complying with any regulations, including speed restrictions and navigation marks, while leaving or returning to the berth or mooring.

A4.6 A breach of items 4.2 and 4.3 will be considered as damage and the cost of rectification will be deducted from the damage deposit.

SI ADDENDUM B - EQUIPMENT LIST

The following non-fixed items, provided by the OA, are to be carried on board at all times in their designated place while sailing. Any loss shall be reported on the daily damage report.

SONARS

SAILS AND SAILING EQUIPMENT

- Red protest flag
- Yellow breakdown flag
- Mainsail and set of battens
- Jib
- Spinnaker
- Three sail bags
- One spinnaker pole
- Two spinnaker sheets
- Jib sheets
- Two twings
- Tiller extension
- Two headsail track cars

SAFETY GEAR

- Life jackets for each crew member (provided by competitors or OA)
- Paddle
- Bucket and sponge
- Bilge pump
- Throwable cushion

GROUND TACKLE

- Anchor and chain
- Anchor line

MOORING LINES AND FENDERS

- Four dock lines
- One tow line
- Two blue (or white) fenders

RS21s

SAILS AND SAILING EQUIPMENT

- Red protest flag
- Yellow breakdown flag
- Mainsail and set of battens
- Jib and set of battens
- Gennaker
- Three sail bags
- Two Gennaker sheets
- Jib sheets
- Tiller extension

SAFETY GEAR

- Life jackets for each crew member (provided by competitors or OA)
- Bucket and sponge
- Bilge pump
- Throwable cushion

MOORING LINES AND FENDERS

- Four dock lines
- One tow line
- Two blue (or white) fenders

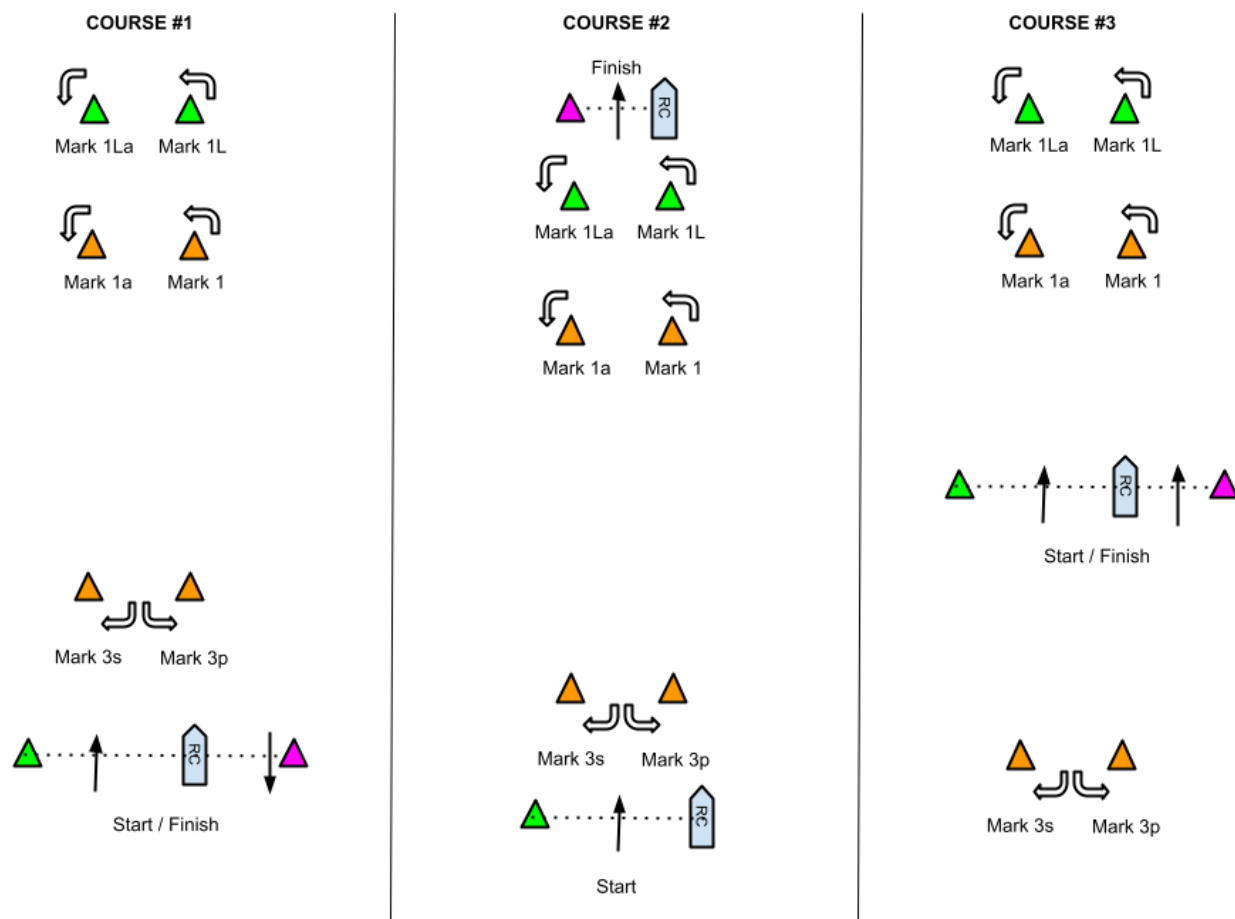
SI ADDENDUM C – COURSES AND MARKS

C1 THE COURSES

C1.1 Course designations are as follows:

Course 1	Start - 1p – 1ap - 3s/3p - 1p – 1ap - Finish (downwind)
Course 2	Start - 1p – 1ap - 3s/3p - 1p – 1ap - 3s/3p - Finish (upwind)
Course 3	Start – 1p – 1ap – 3s/3p – 1p – 1ap – 3s/3p – Finish (upwind)

C1.2 Course Diagrams



C1.3 No later than the warning signal, the course to be sailed will be displayed.

C1.4 No later than the warning signal, the Race Committee will display on a board the approximate compass bearing and distance of the first leg.

C1.5 Mark 3s/3p is a gate. In the event one of the gate marks is missing, the single remaining mark shall be rounded to port.

C1.6 Mark 1a is an offset mark adjacent to mark 1. Mark 1aL is an offset mark adjacent to mark 1L.

C1.7 Marks, including the windward offset mark, shall be rounded in order and always left to port, except that a gate, when used, shall be rounded as described in Definitions, *Sail the Course*.

C1.8 **Long/Short Windward Marks:** For all courses, the Race Committee will set both a long windward mark and offset, and a short windward mark and offset. The distance to the long windward mark and the distance to the short windward mark will be displayed on a course board. The RS21 fleet shall use the long marks for all roundings. The Sonar fleet shall use the short marks for all roundings.

C2 MARKS

C2.1 Marks 1, 1a, 3s and 3p will be orange inflatables.

C2.2 Marks 1L and 1La will be green inflatables.

C2.3 The starting mark will either be a Race Committee signal vessel displaying an orange flag or a green inflatable.

C2.4 The finishing mark will be a pink inflatable.

C2.5 For Marks 1, 1a, 3s and 3p new marks, as provided in SI 10, will be yellow inflatables.

C2.6 For Marks 1L and 1La, new marks will be pink inflatables.

C2.7 For course "3", the start/finish marks shall not be considered marks of the course unless a boat is starting or finishing.

C3 COURSE CHANGE

C3.1 To change the next leg of the course, the Race Committee will lay a new mark (or move the finishing line to a new position) and remove the original mark as soon as practicable. When in a subsequent change a new mark is replaced, it will be replaced by an original mark.

C3.2 The Race Committee may change the course by up to five degrees in bearing and/or 0.2 nm in length without a signal or change of mark color. This changes RRS 33.

C4 THE FINISH

C4.1 The finishing line will be between a staff displaying a blue flag on a Race Committee vessel and the nearby finishing mark.

C4.2 For Course 2 the finish line will be located approximately 0.1NM to windward of the long windward mark.

SI ADDENDUM D – FORMAT AND BOAT ASSIGNMENTS

D1 FORMAT

D1.1 There will be a Qualifying Series followed by a Gold Series and a Silver Series.

D2 QUALIFYING SERIES

D2.1 Twelve (12) teams will be assigned to each the RED group and the BLUE group by the OA as designated in SI Addendum E – Rotation Sheet. Addendum E will be posted online and distributed no later than Monday, September 12. Teams are scheduled to race in both Sonars and RS21s and will be assigned boats at random within their group to determine the rotation of boats.

D2.2 The planned format is that each group will spend one day racing each fleet of boats. Each team will be assigned a boat and there will be no bye races. The Race Committee will endeavor to sail the number of races as shown in SI Addendum E – Rotation Sheet, but failure to do so shall not be grounds for a boat to request redress. When the Race Committee displays flag “R” at the finish, teams shall rotate into their next boat according to the rotation. This is a direct swap with a team from the other group.

D3 GOLD AND SILVER SERIES

D3.1 GOLD SERIES – The top six (6) teams from each group in the Qualifying Series shall compete in the Gold Series to be sailed in RS21s. A boat draw will be done at the Morning Briefing each day. Teams will sail in their drawn boat for the entire race day – there will be no rotating during the day.

D3.2 SILVER SERIES – The remaining twelve (12) teams from each group in the Qualifying Series shall compete in the Silver Series to be sailed in Sonars. A boat draw will be done at the Morning Briefing each day. Teams will sail in their drawn boat for the entire race day – there will be no rotating during the day.

D4 SCHEDULE

D4.1 It is the intention of the OA to run the Qualifying Series on Wednesday and Thursday, September 14-15.

D4.2 It is the intention of the OA to run the Gold Series and the Silver Series on Friday and Saturday, September 16-17.

D4.3 The OA may change the schedule of racing, including extending the Qualifying Series to Friday, September 16. Any changes to the schedule will be announced in accordance with the Sailing Instructions.

SI ADDENDUM E – ROTATION SHEET

See separate attachment.