APPENDIX C

The Programming Skills Challenge

Overview

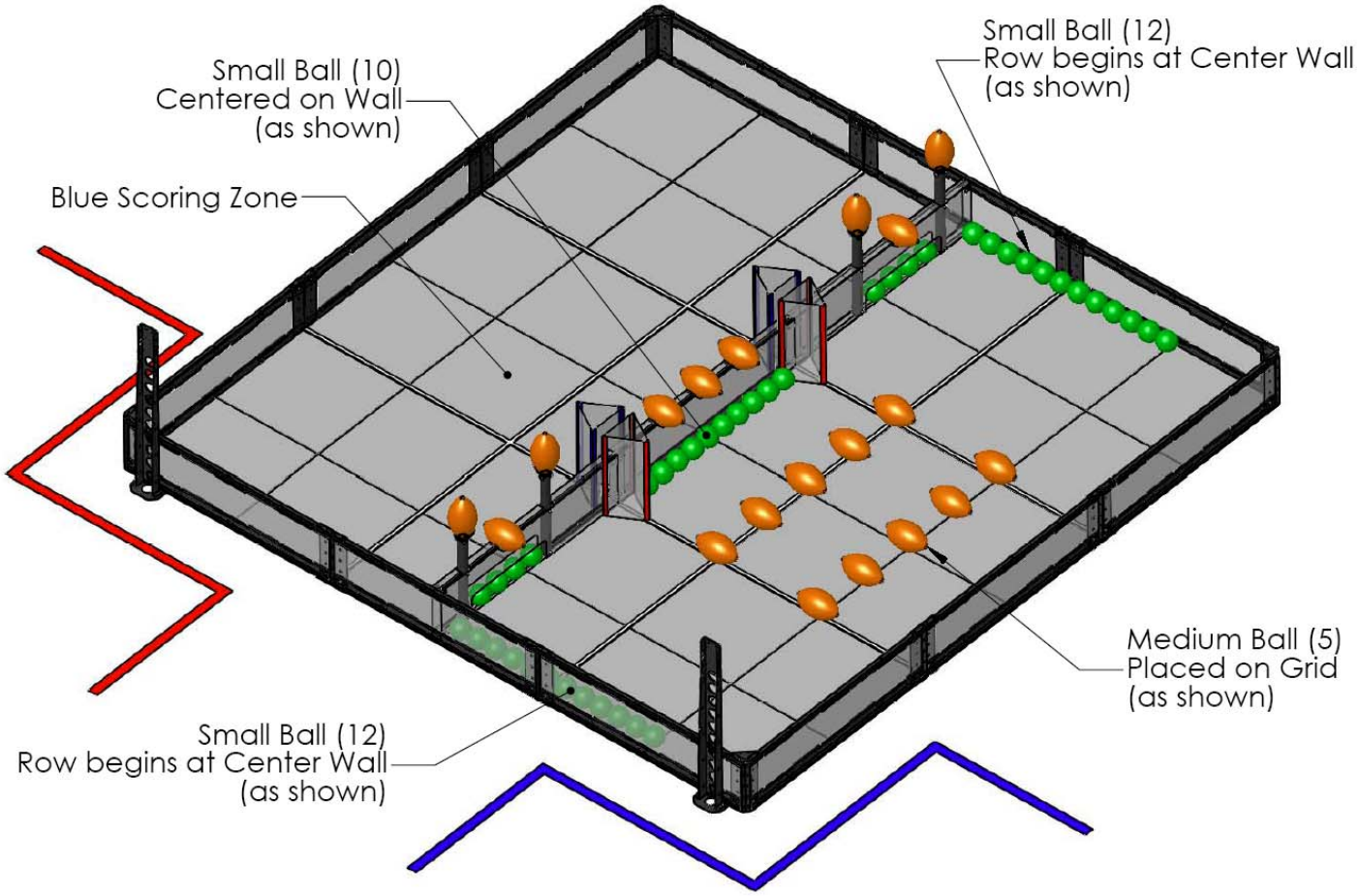
This section describes the Programming Skills Challenge of VEX Clean Sweep.

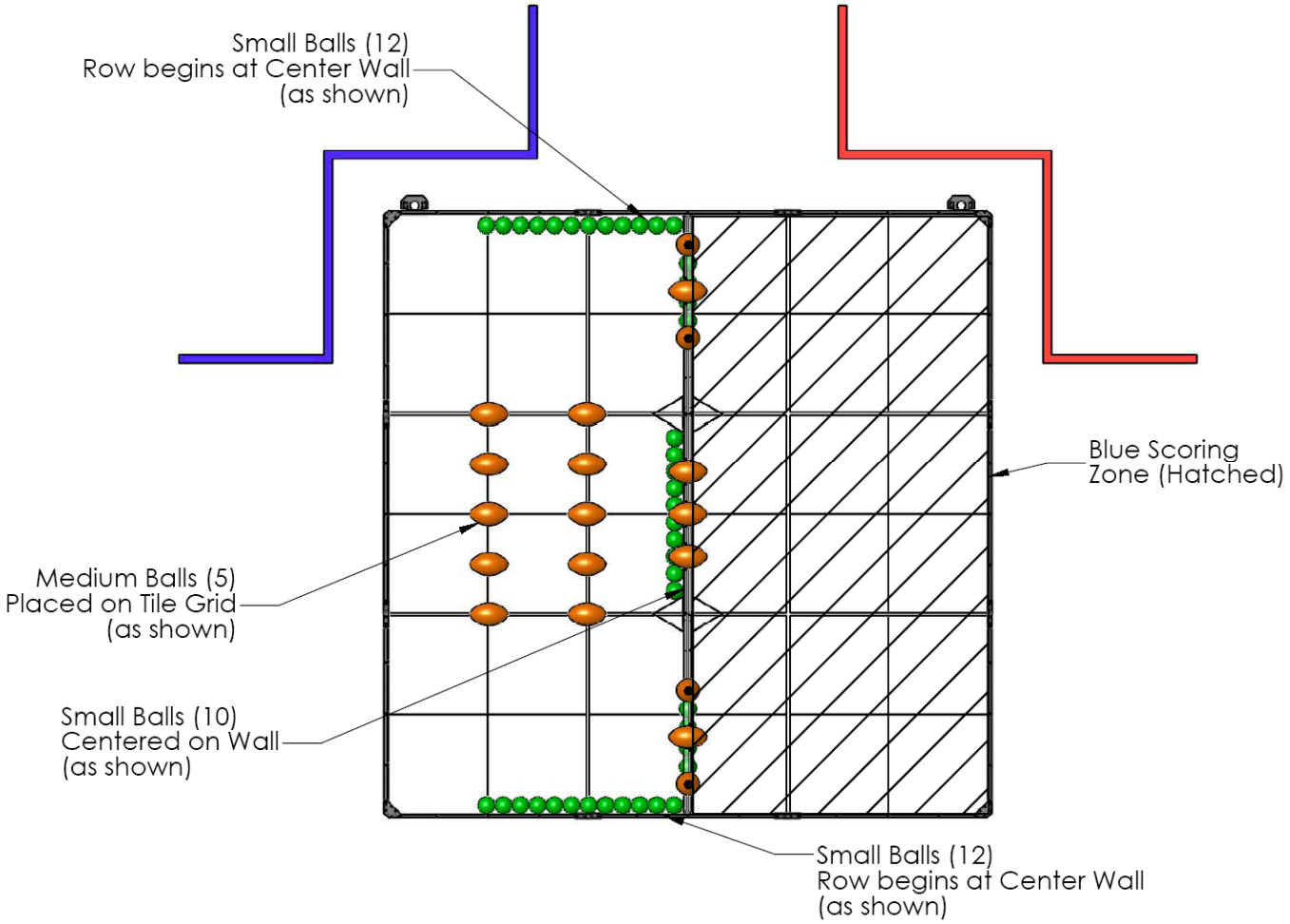
Please note that the Programming Skills Challenge may not be offered at all tournaments. Please check with your local event organizer, or www.robotevents.com for more information.

Programming Skills Challenge Description

In this challenge teams will compete in 1:00 long autonomous only matches in an effort to score as many points as possible. The playing field will be set up identically to that of a normal VEX Clean Sweep tournament match, with the following exceptions.

- The field will be setup on one side of the wall - balls will be placed in the red alliance scoring zone.
- All teams competing will be considered "BLUE", the rules will be enforced accordingly and the match will be scored as such.
- There will be an additional (22) small balls and an additional (5) medium balls placed on the field (as shown in the diagrams below).
- Only one robot is on the field with only one team competing at a time
    - This robot MUST be setup as though it were a "blue" robot (on the side of the field with the balls).





Programming Skills Challenge Definitions

Note: The Programming Skills Challenge and The Robot Skills Challenge use the same field setup! (Please see "The Game" section of the manual for further information on field setup)

Please note that all definitions from "The Game" section of the manual apply to the Programming Skills Challenge, unless otherwise specified.

Programming Skills Match – A *Programming Skills Match* consists of a 1:00 *autonomous period*. There is no *driver controlled period*.

Programming Skills Challenge Rules

Please note that all rules from "The Game" section of the manual apply to the Programming Skills Challenge, unless otherwise specified.

Programming Skills Challenge Scoring

- A *small ball* that is *scored* in the *blue alliance scoring zone* is worth one (1) point.
- A *small ball* that is *locked up* in a *blue goal* is worth three (3) points.
  - *Small balls* that are *locked up* are ONLY worth (3) points, these balls are not worth additional points for being *scored*.
- A *medium ball* that is *scored* in the *blue scoring zone* is worth five (5) points.
- A *large ball* that is *scored* in the *blue scoring zone* is worth ten (10) points.

VEX Clean Sweep Specific Programming Skills Challenge Rules

<SPSC1> Prior to the start of each *programming skills match*, each team will have four (4) *small balls* and one (1) *medium ball* available to preload into their robot.

a. A *ball* is considered to be legally preloaded if it is touching the *robot* and not touching any part of the playing field (including the foam field surface) or game objects.

<SPSC2> Each robot competing in the Programming Skills Challenge is considered to be "blue". All VEX Clean Sweep rules will be enforced accordingly, and the match will be scored as such.

<SPSC3> During the last thirty seconds (0:30) of each *programming skills match,* each team will have the opportunity to introduce a *large ball*. All VEX Clean Sweep rules regarding the introduction of the *large ball* are applicable.

Programming Skills Challenge Format

The Programming Skills Challenge is an optional event. Teams who do not compete will not be penalized in either the main tournament, or the Robot Skills Challenge.

- Teams will play *programming skills matches* on a "first come, first serve" basis.
- Teams will be guaranteed a minimum number of *programming skills matches*, to be determined by the event organizers
- Teams may also be limited to a maximum number of *programming skills matches*, to be determined by the event organizers

Programming Skills Challenge Rankings

- For each *programming skills match* teams are awarded a score based on the above scoring rules.
- Teams will be ranked based on their highest *programming skills match* score, with the team with the highest score being declared the Programming Skills Challenge Winner.
- In the case where two teams are tied for the highest score, the tie will be broken by looking at both teams' next highest *programming skills match* score.
- If the tie cannot be broken (i.e. both teams have the exact same scores for each *programming skills match*), the next tie-breakers will be based on the balls scored in each team's highest scoring *programming skills match*. The tie-breakers are as follows (in order):
  - Number of Large Balls Scored
  - Number of Medium Balls Scored
  - Number of Small Balls Locked Up
- If the tie still isn't broken, both teams will be declared the winner.

Programming Skills Challenge Heads-Up Match

The following method will be used to determine the Programming Skills Challenge Winner at certain events, including the 2010 VEX Robotics World Championship.

- The top two teams from the Programming Skills Challenge Rankings will advance to a final heads-up match.
- Each team will perform one (1) *programming skills match*, with the 2nd place team performing first or with both teams performing simultaneously on separate fields.
- The team with the highest score in this heads-up match will be declared the Programming Skills Challenge Winner.