FIRST® RISE℠ powered by Star Wars: Force for Change

2019-2020 FIRST® Tech Challenge

Tournament Director Guide
Sponsor Thank You

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ptc
Volunteer Thank You

Thank you for taking the time to volunteer for a FIRST® Tech Challenge event. FIRST® and FIRST® Tech Challenge rely heavily on volunteers to ensure events run smoothly and are a fun experience for teams and their families, which could not happen without people like you. With over 5,500 teams competing yearly, your dedication and commitment are essential to the success of each event and the FIRST Tech Challenge program. Thank you for your time and effort in supporting the mission of FIRST!

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Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
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Security & Safety

Security

Safety

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Introduction

What is FIRST® Tech Challenge?
FIRST® Tech Challenge is a student-centered program that focuses on giving students a unique and stimulating experience. Each year, teams engage in a new game where they design, build, test, and program autonomous and driver operated robots that must perform a series of tasks. To learn more about FIRST® Tech Challenge and other FIRST® Programs, visit www.firstinspires.org.

Gracious Professionalism®

FIRST® uses this term to describe our programs’ intent.

Gracious Professionalism® is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

Watch Dr. Woodie Flowers explain Gracious Professionalism in this short video.

Learn more about the roles of volunteers on our Volunteer Resources page, “Volunteer Role Description”.

Job Description

A FIRST Tech Challenge Tournament Director plans, designs and produces a FIRST Tech Challenge tournament, and agrees to follow the requirements set forth by FIRST, including, but not limited to:

- Game Rules
- Robot Rules
- Judging Rules
- Advancement and Eligibility Rules
- Ensuring teams meet participation rules
- Safety Rules
- Volunteer Screening Rules
- Volunteer Certification Rules

The Tournament Organizer is required to send event results to FIRST within 5 days of the close of the event. The method of submission of the results can be found in the Scorekeeper manual.

- Proper Dress (day of event):
  - Wear comfortable shoes, most of the day will be spent standing and walking between the pit area and the competition fields.
  - ANSI Z87.1 certified safety glasses must always be worn in the competition area.

Volunteer Training and Certification
Volunteers must apply to their role using the Volunteer Registration System. After the volunteer has applied to their role, a link to the appropriate training will appear on the Volunteer dashboard, once the training has been published.

New Event Directors must read this manual before the planning process for the event and refer to it as needed throughout the planning process. Veteran Event Directors should review this manual to verify that the event meets FIRST requirements for safety, volunteer certifications, team eligibility, team advancement, judging, and game play.

Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Volunteer Minimum Age Requirement
FIRST requires that FIRST Event volunteers be at least 13 years old, however, the Regional Planning Committee can increase the age requirement as needed. Adult volunteers cannot have children with them while volunteering nor be responsible for supervising children at the event. Children under the minimum age are welcome at FIRST Competitions with suitable supervision by someone other than a volunteer.

Judge Advisor, Judge, Judge Match Observer Minimum Age Requirement
The minimum age allowed for volunteers filling a role as a Judge Advisor, Judge, or Judge Match Observer is 21. Students who have been a part of a team must be at least 3 years removed from the team before they can serve as a Judge Advisor, Judge, or Judge Match Observers at an official FIRST Tech Challenge event.

Head Referee and Referee Minimum Age Requirement
The minimum age allowed for volunteers filling a role as a Head Referee or Referee, is 21. Students who have been a part of a team must be at least 3 years removed from the team before they can serve as a Head Referee or Referee at an official FIRST Tech Challenge event.

WTA and CSA Minimum Age Requirement
The minimum age allowed for Control System Advisors (CSA) and Wireless Technical Advisors (WTA) is 18.

Key Volunteer Role Minimum Age Requirement
Volunteers MUST be at least 21 years old before they can serve in a Key Volunteer Role for the FIRST Tech Challenge. Key Volunteer positions include: Volunteer Coordinator, Head Referee, Judge Advisor, Field Manager, Field Technical Advisor, Lead Robot Inspector, Lead Field Inspector, and Lead Scorekeeper. Local Affiliate Partners can make case by case exceptions to these guidelines by contacting FIRST for approval.

Bring a Friend!
Volunteers are a huge part of the FIRST Tech Challenge Program and continuing to inspire students to seek out careers in science, technology, engineering, and math (STEM). FIRST Tech Challenge needs your help in recruiting new volunteers to keep our programs thriving for future generations! If you have a friend or co-worker you think would be interested in volunteering at an event, there are just a few easy steps to help get them involved!

1. Check out our full list of volunteer opportunities online!
2. Have them apply for the Event in the Volunteer Registration System. Volunteers must be screened before volunteering.
3. Have them contact Firsttechchallenge@firstinspires.org with any questions they may have.

If they are concerned about jumping in head first, no worries! Job shadowing at a FIRST Tech Challenge Event is a great way to get a taste of what a full day’s worth of competition looks like. New volunteers can discover ways they can fit their personal skills into a volunteer position!

Role & Responsibility of an Event Host

Tournament Director Role & Responsibility
The Tournament Director’s role is to plan and deliver FIRST Tech Challenge events, following the guidelines in this document, and the requirements in the agreement between the Affiliate Partner and the Tournament Director, or between the Affiliate Partner and FIRST.
The Tournament Director:

- Works with the Affiliate Partner to secure event venues for the season’s events
- Creates event schedule, including judging schedules and match schedules
- Creates floorplan and event layout for event day
- Sets up load-in/load-out schedule
- Works with the Volunteer Coordinator to identify staffing needs for the entire event
- Serves as the principal liaison with the facility manager
- Coordinates food, t-shirts, etc. for events

**Qualifier Agreement**

Hosts of Qualifying and League Tournaments must sign a Qualifying Tournament or League Agreement and follow a set of expectations in addition to those from FIRST and FIRST Tech Challenge. Qualifier Agreements come from the state or regional Affiliate Partner. Be sure to understand and adhere to the requirements in the Agreement.

**FIRST Tech Challenge Tournament Structure**

The FIRST Tech Challenge program is both competition and merit-based. The tournament structure is tiered with levels of advancement that lead to the World Championships. Teams advance by accumulating Ranking Points and Tiebreaker Points received on the field and through judged awards. Affiliate Partners decide the number of teams that will advance to a State or Regional Championship Tournament within their region. FIRST decides the number of teams that will advance from a State or Regional Championship Tournament to one of the two World Championship Tournaments. To learn more about the advancement and ranking process, review the Game Manual Part 1, Section 7.4
Hosting a *FIRST* Tech Challenge Tournament

**What is a *FIRST* Tech Challenge Tournament?**
A *FIRST* Tech Challenge Tournament is an event that provides an advancement opportunity for teams. A Tournament follows *exactly* all the event rules provided. Including, but not limited to:

- Game Rules
- Robot Rules
- Judging Rules
- Advancement Criteria
- Volunteer Screening Rules
- Volunteer Certification Rules

A *FIRST* Tech Challenge Tournament uses the season’s official playing field, the season’s official scoring system, and the organizer sends the event results to *FIRST*. Certification, through *FIRST* is required for key event volunteers. Only teams who are registered for the current season and are in good standing with *FIRST* may participate.

With these requirements, we hope to achieve a consistent experience for all participants.

*Note – North America teams must register in the *FIRST* Team Registration System and be in good standing with *FIRST*. This means that the team must have adults who have completed the *FIRST* Youth Protection screening in both the Lead Coach/Mentor 1 and Lead Coach/Mentor 2 roles. The season team registration fee to *FIRST* must also be paid. Teams outside of North America must register with the Affiliate Partner in their home country. Unregistered teams are not allowed to compete in any level of *FIRST* Tech Challenge tournaments.*

**What is a Qualifying Tournament?**
A Qualifying Tournament for a State or Regional event may only be held with the agreement and involvement of the Affiliate Partner. Your Affiliate Partner will send you a Qualifying Tournament Agreement for your region. For many teams, a Qualifying Tournament is the highest level of *FIRST* Tech Challenge Tournament they will experience.

Qualifying Tournaments follow the same judging and game guidelines and format of Championship Tournaments, but on a smaller, less expensive scale. Qualifying Tournaments are usually held before Championship Tournaments in regions where there are many Teams. The number of teams advancing to the Regional Championship Tournament depends on the capacity of the Regional Championship Tournament, the number of Qualifying Tournaments, and the number of teams attending the Qualifying Tournament. The advancement criteria for moving up to the next level of tournament is detailed in Section 7.0 of the *FIRST* Tech Challenge *Game Manual Part 1* and must be followed exactly. Each team must be scheduled for play in not less than 5, and not more than 6 Qualification Matches. The game must be played exactly as described in the

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**Official vs Endorsed vs Unofficial**

There are many types of *FIRST* Tech Challenge events. Some events are “official”, meaning that they are a part of the advancement structure for the *FIRST* Tech Challenge. “Endorsed” means that the event is not a part of the advancement structure for the program, but the event is hosted by or sanctioned by an Affiliate Partner or *FIRST* Tech Challenge Headquarters. Other events are “unofficial” and could be hosted by anyone with an interest. Official and endorsed event information provided by the Affiliate Partners is promoted on the [www.firstinspires.org](http://www.firstinspires.org) website and via the @FTCTeams Twitter and Facebook accounts. Unofficial events are not promoted by *FIRST* or the *FIRST* Tech Challenge.
Game Manual. Robots must pass Robot and Field Inspections, and the judging must exactly follow the guidelines outlined in the Judges Manual. All volunteers must be screened, and FIRST Tech Challenge certified volunteers must be used in key roles.

**What is a League Tournament?**
A League Tournament, (formerly called League Championship Tournament) for a State or Regional event is the culminating event for League Play. These events are hosted by League Organizers and follow the same guidelines as other official program tournaments.

League Organizers, under the direction of, and with the permission of the Affiliate Partner may hold a League Tournament event for two leagues at once. The Meet results for both Leagues are input to the Scoring System, and the League Tournament will begin with the combined rankings for both Leagues.

For many teams, a League Tournament is the highest level of FIRST Tech Challenge Tournament participation they will experience.

League Tournaments follow the same judging and game guidelines and format of Championship Tournaments, but on a smaller, less expensive scale. League Tournaments are usually held before Championship Tournaments in regions where there are many teams. The number of teams advancing to the Regional Championship Tournament depends on the capacity of the Regional Championship Tournament, the number of Leagues, Qualifying Tournaments, and the number of teams attending the League Tournament. The advancement criteria for moving up to the next level of tournament is detailed in Section 7.0 of the FIRST Tech Challenge Game Manual Part 1 and must be followed exactly. League Tournaments use a cumulative ranking (carried forward from League Meet events). Each team must be scheduled for play in not fewer than 5, and not more than 6 Qualification Matches at the League Tournament. The Game must be played exactly as described in the Game Manual. Robots must pass Robot and Field Inspections, and the judging must exactly follow the guidelines outlined in the Judges Manual. All volunteers must be screened, and FIRST Tech Challenge Certified volunteers must be used in key roles.

**What is a League Meet?**
A League Meet is a one-field competition that is comprised of qualification matches only. There are no elimination matches, official Judging, or awards at a League Meet. The League Meet is approximately 3-4 hours long and includes: set-up, inspections, a minimum of 5 or a maximum of 6 matches per team, and tear down. League Meets may include Judging practice.

League Meets must follow the same game play, hardware, software and field inspections, as well as volunteer screening requirements as any other official FIRST event. Teams may play in as few or as many League Meets as they choose.

All teams within a League participate in a League Tournament. When the League Meet data is imported into the scoring system at the League Tournament, the scoring system takes each team’s best 10 Ranking Points and Tiebreaker Points to determine the starting Ranking Points and Tiebreaker Points for each team. Should a team not have 10 match results, the system will take all the available results for the team and will impact their initial standings at the League Tournament.

**What is a Championship Tournament?**
A Championship Tournament is a State or Regional Event that is usually managed by an Affiliate Partner.

For many teams, a Championship Tournament is the highest level of FIRST Tech Challenge Tournament participation they will experience.
Tournament depends on the particular State/Regions allocation allotment to one of the two World Championships. The advancement criteria for moving up to the World Championships is detailed in Section 7.4 of the FIRST Tech Challenge Game Manual Part 1, and must be followed exactly. Each team must be scheduled for play in not fewer than 5, and not more than 6 Qualification Matches. The Game must be played exactly as described in the Game Manual. Robots must pass Robot and Field Inspections, and the Judging must exactly follow the guidelines outlined in the Judges Manual. All volunteers must be screened, and FIRST Tech Challenge certified volunteers must be used in key roles.

**What is a Scrimmage?**

A scrimmage is not considered an official tournament, but many teams and organizers who host scrimmages follow the same event planning guidelines that the host of an official tournament host might follow. Teams and volunteers who are interested in hosting a scrimmage are encouraged to use this guide to help them to plan a successful event.

**Event Structure**

Official tournaments must follow the structure given by FIRST Tech Challenge staff and the State or Regional Affiliate Partner. Variations to the structure of an event must be approved in advance, and in writing by FIRST Tech Challenge.

A Regional Championship Tournament is made up of teams who advanced through events held in that region (see Tournament Structure Chart). A region may have an unlimited number of Qualifying Tournaments, or as few as three. The Affiliate Partner is responsible for making sure that only those teams registered with FIRST Tech Challenge compete in the Qualifying Tournament and for providing the Qualifying Event Director with detailed team registration and advancement requirements for the region.

**Planning Timeline**

Planning for Qualifying Tournaments should begin as early as possible. For large events like Championship Tournaments, planning could begin a year ahead of time. For smaller events, like League Meets, a much shorter window is possible. The following table outlines tasks and when they should be completed using an 8-month timeframe. This timeline should be adjusted per your needs and is only a guideline.
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<th>Task</th>
<th>7-8 Months Before</th>
<th>4 - 6 Months Before</th>
<th>2 - 3 Months Before</th>
<th>1 - 2 Months Before</th>
<th>After</th>
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<td>Sign a tournament agreement with your Affiliate Partner (if applicable)</td>
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<td>Recruit tournament committee</td>
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<td>Begin to recruit and train volunteers</td>
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<td>Tournament website ready</td>
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<td>Select &amp; contract for event venue</td>
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<td>Send event information to your Affiliate Partner or FIRST</td>
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<td>Reserve equipment</td>
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<td>Order field perimeter and tiles</td>
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<td>Order game elements</td>
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<td>Site visit with Event Manager, Technical Director</td>
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<td>Begin to recruit and train Referees</td>
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<td>Begin to recruit and train Judges</td>
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<td>Begin inviting VIPs and keynote speakers</td>
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<td>Hire/Invite Disc Jockey, MC, Game Announcer</td>
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<td>Contact media</td>
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<td>Begin program book &amp; registration packets</td>
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<td>Order trophies and medals</td>
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<td>Begin assembly of equipment</td>
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<td>Design and order volunteer shirts</td>
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<td>Begin accepting tournament applications</td>
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<td>Create a site map</td>
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<td>Email teams a link to event info</td>
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<td>Order food and beverages for volunteers</td>
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<td>Train volunteers</td>
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<td>Assemble field elements and test everything</td>
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<td>Assemble supplies, including signage</td>
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<td>Assemble, procure sizing boxes</td>
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<td>Assemble robot alliance flags</td>
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<td>Confirm volunteers</td>
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<td>Obtain insurance certificate (if needed)</td>
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<td>Confirm team registration and send teams tournament information</td>
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<td>Confirm rentals/reservations</td>
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<td>Print and assemble manual binders and blank forms</td>
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<td>Produce Judge and Referee sheets, schedules, and team lists</td>
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<td>Confirm key volunteers are certified</td>
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<td>Head Referee quality checks game elements</td>
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</table>

Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Finances

A Tournament Director must fund their event. Most generate their funding through a combination of team registration fees and sponsorships. Some Affiliate Partners provide materials to their tournament hosts, and some do not. If you are not the Affiliate Partner, but are an event host, your Affiliate Partner will tell you about regional standards for tournaments, and what materials they will provide to you when you sign your hosting agreement. A best practice is to develop your budget expenses and an income plan at the beginning of your planning process.

Tournament Directors are encouraged to build a finance committee to help with grants, proposals, and in-kind support, and to help manage the budget.

### Finance Timeline

<table>
<thead>
<tr>
<th>Task</th>
<th>7-8 Months Before</th>
<th>4 - 6 Months Before</th>
<th>2 - 3 Months Before</th>
<th>1 - 2 Months Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send award winner names and tournament rankings to Partner or to <em>FIRST</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Send thank you letters to VIPs and volunteers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review evaluations and send to <em>FIRST</em> Tech Challenge</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Schedule Tournament Committee debriefing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Send video, pictures, and articles to <em>FIRST</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return rosters and Consent and Release forms to <em>FIRST</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**For Inspiration & Recognition of Science & Technology**

Revision 1: 07.2019
Budget
Below is a sample budget for a 12-team event. Not every item must be purchased, but could be borrowed, or donated as an in-kind contribution. Items marked in Green can often be borrowed. Items marked in Yellow are first year investments only.

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training/ Workshops</td>
<td>$300 Trains both teams and volunteers</td>
</tr>
<tr>
<td>Playing Field (Borders and Floor)</td>
<td>$2,250 One-time cost for two fields; fields can be re-used. One game field, one practice field <strong>borders</strong> and <strong>floor tiles</strong></td>
</tr>
<tr>
<td>Custodial, Security, Electrical</td>
<td>$500 For two fields, game elements @ $475 plus shipping</td>
</tr>
<tr>
<td>Game Elements</td>
<td>$1,300 Crown Trophy is the official supplier of tournament trophies. Championship Tournaments must be ordered from Crown. League and Qualifying Tournament trophies may be ordered through Crown, or through a local supplier</td>
</tr>
<tr>
<td>Awards</td>
<td>$300</td>
</tr>
<tr>
<td>Catering</td>
<td>$500 Breakfast, lunch, and snacks</td>
</tr>
<tr>
<td>Volunteer Shirts</td>
<td>$250</td>
</tr>
<tr>
<td>Signage</td>
<td>$50</td>
</tr>
<tr>
<td>Printing</td>
<td>$100</td>
</tr>
<tr>
<td>Equipment Rental</td>
<td>$200 Tables, chairs, pipe and drape, stanchions, lighting, printers, computers</td>
</tr>
<tr>
<td>Misc.</td>
<td>$150</td>
</tr>
<tr>
<td>Safety Glasses for Volunteers</td>
<td>$100</td>
</tr>
<tr>
<td>Insurance</td>
<td>$100</td>
</tr>
<tr>
<td>Venue Rental</td>
<td>$250</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$6,350</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Event Registration</td>
<td>$900 I.e.: $75 per Team x 12 Teams = $900</td>
</tr>
<tr>
<td>Sponsorship</td>
<td>$5,500</td>
</tr>
<tr>
<td>Total Income</td>
<td>$6,400.00</td>
</tr>
<tr>
<td>Balance</td>
<td>$50</td>
</tr>
</tbody>
</table>

Sponsors
Sponsorship varies from region to region. If you are hosting a Qualifying or League Tournament, your Affiliate Partner will share expectations for soliciting sponsors and/or sponsorship recognition for your event. Some regions have major sponsors that are recognized at all events, some regions have local sponsors, and others have a combination of both.

Sponsorship can come in the form of funding or in-kind donations. No item or amount is too small! Be clear with your potential sponsors of the value of their support and what they will receive in return. You can never thank your sponsors too much.

Sponsors for your event can receive recognition in various forms, including logo space on event advertisement, documents, press releases, websites or social media, and T-shirts. They should also

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receive a formal thank you and event report post-tournament. Including photos of the sponsor, sponsor signage, and sponsored teams in the post-tournament event are usually well received. Please do not add sponsor branding to official awards, or place sponsor branding on the competition field, game elements, or scoring elements. FIRST branding guidelines must be followed when incorporating a sponsor logo to FIRST materials.

**FIRST Tech Challenge Global Sponsors**

FIRST Tech Challenge global sponsors include Qualcomm, Collins Aerospace, and PTC. These sponsors must receive recognition at every official event. Qualcomm is the FIRST Tech Challenge Season Presenting Sponsor, Collins Aerospace is the FIRST Tech Challenge Official Program Sponsor, and PTC is the FIRST Tech Challenge Official 3D Augmented Reality/Virtual Reality Sponsor. These important relationships are referenced in the awards scripts, and in the scoring system. References to these sponsors cannot be altered or removed. The full name of the season challenge, FIRST SKYSTONE™, presented by Qualcomm Incorporated, must be used. FIRST also supplies all events with templates for event program books and awards PowerPoints. Both of these resources can be found in the Tournament Director section of the firstinspires.org website. These must be used as provided with no alteration of our global sponsor recognition. Tournament Directors do not need to do any additional recognition for these sponsors unless their region or event receives additional support from Qualcomm®, Collins Aerospace, or PTC.

**The Venue**

Your venue must meet some basic requirements for space, electricity, lighting, and safety. The checklist that follows covers the basics. Your event may have some additional requirements, or in the instance of League/Meets, fewer requirements:

**Competition Area**

Space for:

- One or two each 12’x12’ playing fields (add space for driver stations, walking space and 1 table for shot clock per field)
  - 12 to 24 teams – at least one competition field
  - 25 to 36 teams – at least two competition fields
- DJ (one 6’ table)
- Awards table (one 6’ table)
- Scoring table (one 6’ table)
- Audio/Visual tables and gear
- Team queuing and smooth traffic flow
- Awards/Speaker area
- Bleacher seating for 500+ people for a two-field event.

Other considerations:

- Space to hang sponsor banners
- Video projection (screen and projector)
- Loading area (access and proximity)
- Ability to access a scissor-lift in facility (if needed)

**Alternative Arrangement**

Use the same large space to house competition and pit areas.

Perform Robot Inspection at team pit areas, instead of on practice

**Work with your local Fire Marshall to understand the requirements about access, emergency exits, electrical code, etc.**
Pit Area

- Space for:
  - A 10’ x 10’ space for each team is optimal, but an 8’ x 8’ space for each team is allowable.
  - One 6’ table per team
  - One 12’ x 12’ practice field
    - Can your host team provide a field and elements?
  - One Pit Administration table
  - Robot Inspection: Four 6’ tables, or have robot inspectors travel from pit to pit for inspection.
  - A 6’ table for Scholarship and Alumni materials
- Space to hang signs, posters, banners.

For more information about Scholarships and Alumni, see Appendix C.

Electricity

- Adequate power available for the number of team tables in pit, robot inspection, competition fields, and scorekeeping areas, audiovisual needs, Judges’ room, event administration room, registration table, and food services. FIRST Tech Challenge events generally need:
  - Pit Admin: wall outlet
  - Team Pit area: 60-100 amp drop, which feeds
    - One Duplex Outlet for each team pit table
    - One Duplex Outlet for each practice field (if scoring system is set up for practice fields)
  - Competition Area: 60-100 amp drop and internet drop/access (internet is optional)
  - Judges Deliberation Room: standard wall outlet and internet drop/access (internet is optional)
  - Power for computers and printers in event admin office, or at Pit Admin
  - Power for registration and information area
  - For a multi-day event, if power to the pit area is shut off by the venue each night, please notify the teams in advance so they can choose to bring their batteries with them at night to charge.

Lighting

- Consistent lighting for judging areas, pit areas and competition fields

Judging Areas

- Private Judging area for each team of judges, each with:
  - 10 chairs for team seating (optional)
  - 2 – 3 chairs for judges (required)
  - One 6’ table for judges
- Private Judging Deliberation area for the judges, with adequate space for:
  - Chairs for all Judges
  - 1 6’ table for every 2 – 3 Judges
  - Access to a dry erase or chalkboard, or to Post-It easel pads
  - This space should be secluded to allow open discussion of team evaluations and awards
  - This can be one of the Judging rooms after interviews are completed

Event Administration Room

- Space for tables, chair, computers and printers
- Telephone Access
- Internet Access
- Should be a secure area for storage of valuables

Volunteer Room

- Space for food, tables and chairs, coats and personal storage

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Registration and Information Area
• Space for two to three 6’ tables and chairs
• Power for computer and printer
• Additional space, table, etc. for volunteer check in

Parking
• Is there adequate parking?
• Is there parking for busses?
• Is there a charge for parking?
• Plan for overflow of cars and consider safety issues of drop off and pickup
• If there is no parking for the venue, be sure to communicate this in the information packet that goes to teams before the event.

Food Area
• Tables and chairs
• Food vendors (does the venue require the use of a specific food vendor?)
  o Is a concession stand possible? Can the host team run a concession stand?
• Trash and recycling receptacles

Signage
• Outdoor signage to announce event location and time
• Parking signage
• Indoor signage to direct spectators
• Indoor signage to direct teams
• Location signs (pit, registration, competition fields, EMT, Judging, etc.)
• Pit table signage for teams and volunteers to locate specific teams
• Youth Protection signage
• Program branding
• Safety Glasses reminder signage

Resources
• Is there a house sound system available for your use?
• Communication devices (if the venue is large and requires them)
• Video equipment such as cameras, video mixer, large display screen (optional)
• Office equipment (copier, computers, printer)
• Are there tables and chairs on site for use?
• Pipe and drape
• Access to a volunteer base
• Access to a service-oriented organization that can provide food and beverage service as a fund-raiser for their organization
• Assistance with marketing the event
• Bleachers or other spectator seating
• Electricity – calculate 20 amps per team for pits

Proximity between Pit and Competition Areas
• Efficient traffic flow
• More distance or a more complicated access will require teams to spend a longer time in queue, adjust schedule accordingly
Accessibility
- Access to major highways, hotels, food establishments, gas stations
- Accessible for the disabled

Safety Requirements
- Building fire code capacity
- Will you need to hire police, security, or EMT for event?

Setup, Preparation and Cleanup
- One-day full site access for load in
  - Try to set up the evening before. If that is not possible, be sure to staff enough volunteers to set up early the morning of the event
- When are you expected to be fully loaded out?
- What will the site do to help you with load in/load out?
- Is the site a union facility? How will that impact your budget? How will that influence your schedule?
- Who is responsible for site cleaning before and after the event? Will you need to pay for janitorial services?
- Who is responsible for trash removal and site maintenance during the event?
- Remember to recycle whenever you can
- Who is the key venue contact for unlocking doors?
- Who is the IT contact (if site WIFI becomes a problem for the event)?
- Is a facilities rental contract or form required?
- Does the gymnasium floor require a cover?
- Is a Certificate of Insurance required?

After you select your venue, work with your event manager, technical director and the site Facility Manager to create a site plan. Make sure to diagram all the components you need to run an event, including power drops, traffic patterns, and accessibility for teams, volunteers and spectators. Share your site plan with your other key volunteers.

IT Equipment & Needs
Be sure to notify the IT staff at the venue that the robots at the event will be controlled wirelessly. Each robot will establish its own private 802.11 Wi-Fi network. These private networks will only be used to control the robots during competition. They will not connect into the venue’s computer network.

Also, if you plan to use a wireless network to connect the scoring system computers, be sure to notify the IT staff that an additional network will be established to connect the scoring system devices. This scoring network will not connect into the venue’s computer network.

See Appendix B for a letter from FIRST Tech Challenge Engineer, Thomas Eng that you can give to the Venue IT staff.

Ask the venue for the name of someone on their IT staff that you can contact on the day of your event, if a Wi-Fi suppression system is active and interferes with robot connection.

If you are using the venue AV system, you should have one venue AV staff on standby dedicated to support the AV needs of the event during the day of your event.

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Remember to:

- Check for Wi-Fi suppressors (note that all Wi-Fi suppressors should be disabled for the tournament)
- If possible, turn off unneeded Wi-Fi access points at the venue.

**Special Wi-Fi Requirements for an Adjacent FIRST Robotics Competition**

Some tournaments might share a venue with a FIRST Robotics Competition that is occurring at the same time. For this special situation, the Tournament Director should work with the people running the FIRST Robotics Competition to take steps to avoid wireless interference.

Some of the Android devices that are used to control FIRST Tech Challenge robots can operate in the 2.4GHz or 5GHz portion of the radio spectrum.¹ FIRST Tech Challenge and FIRST Robotics Competition organizers should coordinate their Wi-Fi usage to avoid conflicts:

- Organizers should agree on which 2.4GHz channels are reserved exclusively for FIRST Tech Challenge use. FIRST Robotics systems should avoid operating on these channels.
- Organizers should agree on which 5GHz channels are reserved exclusively for FIRST Robotics Competition use. FIRST Tech Challenge systems should avoid operating on these channels.
- A non-conflicting and non-overlapping 2.4GHz channel can also be designated for FIRST Robotics Competition use.
- A non-conflicting 5GHz channel can also be designated for FIRST Tech Challenge use.

**Accessibility**

Be sure the venue can accommodate team members and guests of varying abilities and needs. You should communicate any special arrangements, such as alternative entrances, to teams in pre-event communication. Be sure that the space allows for ease of movement for spectator and team traffic during the event day, as well as plan for adequate travel space for the queuing path.

**Date Selection**

If you are hosting a Qualifying or League Tournament, your Affiliate Partner will inform you of the window of time during which your event may occur. If you are hosting a State or Regional Championship Tournament, your Partner Services Manager will inform you of the window of time during which your event may occur. Remember that you will need at least the evening before your event to setup, so be sure to book the venue for two days. When selecting your date within that given window, factors to consider are:

**Date Selection Considerations:**

- What is the date range approved by FIRST for FIRST Tech Challenge Events?
- Are there any FIRST® LEGO® League or FIRST® Robotics Competition events happening in my area?
  - Some teams may participate in multiple programs.
  - Some volunteers participate in multiple programs.
- When are FIRST Tech Challenge events happening in regions around me?
  - Key Volunteers from other locations may be willing to help at your event.
  - Many teams will travel to nearby regions for another chance to compete.
- Do the teams in my area have educational or religious considerations that might make a Friday or Sunday more appealing?

¹ The original approved phones only had 2.4 GHz radios. More recently approved phones have 2.4 and 5 GHz radios.
• Are other large events happening in the community during that time?
• Weather considerations (be prepared with a back-up plan or date in the case of inclement weather)?
• Availability of a venue able to accommodate the event.

**Time of Event**
FIRST Tech Challenge tournaments have basic guidelines that must be followed to keep the quality of the events and the experience of the teams consistent in every part of the world. Since FIRST Tech Challenge Tournaments are one-day events, you will need to consider the size of your event, and how many teams will be competing to create the appropriate timing. Given that the event is one day only, there are guidelines that should be considered when you are planning.

All the event-day schedule items impact the timing of your event. It is important to understand the activities of the event that will take large portions of the competition day schedule. Equally important is understanding which aspects of the event can be run simultaneously. You want to make sure that you plan to have the capacity to still run the scheduled matches. Please reference this **Sample Day Event Schedule**, in the event day section of this document.

**Qualifying Matches**
At FIRST Tech Challenge tournaments, teams must participate in no fewer than 5 and not more than 6 Qualifying Matches, and no more than 6 Qualifying Matches. For each match, teams will be randomly paired with another team by the scoring system to form an alliance (either red or blue) and then compete against another alliance of two teams (the other color). They will accumulate points. The teams will be ranked per their performance during the qualifying matches. An event with 20 teams or less will have two-team alliances in the semifinal and final rounds. An event with 21 teams or more will have three-team alliances in the semifinal and final rounds. The four top-ranked teams from qualifying matches will select alliance partners for the semifinal rounds. These alliances will compete in a best of three round: the alliance that wins two matches will advance to the finals. Be sure to read the **FIRST Tech Challenge Game Manual Part 1** and **Game Manual Part 2** for specific, detailed information pertinent to the current game challenge.

**Match Time Calculation**
Matches are calculated by the length of a “cycle”. A match cycle is more than just the 2.5 minutes of match time, it also includes the time needed to move the teams to the field, for teams to place their robots, to pair their drivers station with their robots, to announce the teams, to play the match, the pause between autonomous and driver-controlled play, for Referees score the match, to remove the robots, to reset the field, and a little spare time built in. As you can see, a lot happens in a match cycle and running a cycle smoothly will ensure the event stays on schedule. For events with two competition fields, the minimum required cycle time is 7 minutes per match. For events with a single competition field, the minimum required cycle time is 12 minutes per match.

Calculate match times by multiplying the number of teams by the number of matches; then divide that number by 4 Teams per match; multiplied by 7 or 12-minute cycles; divided by 60 minutes in an hour, will equal the length of your qualifying matches. The following example assumes a 12-team event with 12-minute match.
cycles and 5 matches per team. Use the second, blank equation inserting the number of teams at your event, the planned length of your match cycles, and the number of matches per team to calculate your event’s match time.

Example:

12 teams x 5 matches = 60 / 4 teams per match = 15 matches x 12-minute cycles = 180 / 60 minutes/hour = 3 hours

**Match Time Calculator**

___ teams x ___ matches = ___ / ___ teams per match = ___ matches x ___ min. cycles = ___ / ___ minutes/hour = ___ hours

**Parking**

The competition site should have access to as much free parking as possible and plans should be made for overflow parking (if applicable). Most FIRST teams will arrive at the competition site via team bus, so a separate area will need to be sectioned off for team bus parking. You might also consider designating space for volunteer parking as well. Some venues will add an extra fee for bus parking, asking questions about that up front will save you from expensive surprises.

Crowd control and traffic flow are important aspects to the smooth running of these events and should be a part of all planning processes. Consider traffic patterns and how that will affect load-in and load-out for teams. The local police/security department should be involved in traffic flow coordination and may choose to assign additional details to ensure road safety. You might also need to designate volunteers to assist in moving traffic during peak event times.

**Security & Safety**

You will need to have a plan for who will be responsible for handling safety or security concerns, which may be dictated by the Venue. FIRST requires Tournament Directors to print and have on hand several reporting forms. See Appendix F: Printing Checklist for a complete list.

**Security**

Depending on the size and location of your event, consider having at least one security guard available during the event, including at night after the doors close to teams, and until all event personal have left for the day. You may need to request late night access from the venue leading up to and after the tournament.

**Safety**

Depending on the size and location of your event, consider having at least one EMT or nurse on-site and available during the event.

**Emergency Plan**

FIRST requires that you put together an emergency response plan. Having a plan in place will ensure you are prepared in the case of an emergency and can substantially decrease the number of injuries if an emergency arises. Included in your plan should be topics such as:

- A map of all the emergency exits
- Map of fire extinguisher locations in the venue
- Action plan in the case of severe weather
- Evacuation plans
When putting together an emergency response plan, it is important to assign specific tasks to other event volunteers. Make sure each person understands their role in case of an emergency to ensure teams and anyone attending the event are directed properly and safely.

**Insurance**
All FIRST Tech Challenge events **must** be covered by insurance. The host site, national, provincial, state, and local laws may require a specific amount of coverage. Competitions sponsored by schools or universities are usually covered by the host site’s insurance policy. Make sure when choosing a venue that you verify insurance coverage and determine if you will need to purchase insurance.

**Maps & Layouts**
A FIRST Tech Challenge competition has specific requirements, so you need a venue that is the right size and can handle the technical demands. There are six key areas in a tournament, and each will be described in separate detail on the following pages: registration area, competition area, pit area, judging area, volunteer and food area(s).

See **Appendix L** for a suggested event overall layout (designated areas may be in one or more spaces depending on the venue).

**Registration Area**
Team registration, volunteer check-in, and the welcome area should be right near the main entrance. You should have at least one table for teams, one for volunteers, and any additional tables for your event’s needs – provide adequate space between volunteer and team check in to allow these to happen simultaneously. We recommend having a table with information on the other FIRST programs and the FIRST Scholarship/Alumni information. On the FIRST Press Room webpage, you can download and print fact sheets, brochures, and more.

In this area, you will need the following volunteers:

- A dedicated volunteer to oversee check-in
- Floaters assigned the day of to run check-in for teams and volunteers.

As soon as they arrive, volunteers will check-in and receive their registration items (name badge, T-shirt, etc.). Volunteers will need to sign Consent and Release Forms as well as a Conflict of Interest Disclaimer Form. See **Appendix F** for a complete list of Forms and where to find them.

Likewise, teams will immediately check-in and receive their registration items (day’s schedule, instructions, etc.). Teams will need to provide an accurate roster, printed by one of the Lead Coaches or Mentors from their Team Registration page in their account. The roster shall list all students in attendance for the event. Students who do not have completed electronic consent and release forms (as noted on the roster) must submit a paper consent and release form that has been signed by their parent or guardian.

**Competition Area**
The pit area can be in the same room as the competition area, but locating it in another room can minimize traffic, crowding, noise, and wireless communication issues.

The competition area should include: playing field(s), team queueing station(s), match timer(s), scoring table with printer, large screen(s), audience seating, awards table, and a podium (or space for opening and closing ceremonies and awards presentations).

Key layout considerations for efficient match turnaround:

- Keep the Scorekeeper near the competition field to make handoff of the scoring sheet from and communication between the Referee and the Scorekeeper quick and easy.
For events using live scoring, the Scorekeeper table should still be kept close to the competition field.

- Plan the queuing path for teams travelling from the pits to the queuing areas to the competition field and back such that it never crosses audience, spectator, or other traffic to minimize delays. If a crossing is necessary, an assigned traffic control volunteer to prioritize robot traffic is needed. Most teams move their robots around on carts.
- Plan out cable routing to avoid being in common foot traffic areas.

<table>
<thead>
<tr>
<th>Number of Teams at Event</th>
<th>12-23 Teams</th>
<th>24-36 Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Fields</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

In this area, you will need the following volunteers:

- Field Manager (oversees this area)
- Field Technical Assistant(s) (If there is no FM, the FTA is in charge)
- Referees
- Scorekeepers
- Emcee/Game Announcers
- Queuers
- Field Resetters
- Judge Match Observers
- Floaters

## Pit Area
The pit area includes Pit Admin and a practice field and ideally these would all be close together, with Robot Inspection tables nearby (if used). Field Inspection can be done on a practice field or on your competition field. The pit area can be in the same room as the competition area, but it is better located in another room to minimize traffic, crowding, noise, and wireless communication issues. Each team needs a table and access to electricity.

Be sure to put pit tables in numerical order to make the Queuer’s job easier in locating teams.

### Inspection Layout:

- Designate an area for teams waiting for inspection to queue
- Robot Inspection can be done in a designated area, or in the pit space for each team. Either way, scheduled appointments for Robot Inspection can help you to make the best possible use of your time. Scheduling rookie teams for early inspections, and veteran teams for later inspections, and adding a bit of slack at the end of the schedule will help your Robot inspectors to aid the teams who need it the most.
- Place Robot Inspection tables for easy flow and access
- Consider that the second part of inspection, the Field Inspection, is often performed on the competition field. Lay out inspection such that it is easy and obvious to move to the location where field checkout is performed.

### Scholarship and Alumni Table:

- Designate a place for teams and participants to go to learn about FIRST Alumni Relations and the FIRST Scholarship Program. This can be a single 6’ table. Information about resources for this table is in Appendix C.
Other:

- In consideration of the efficient robot flow mentioned in the competition area section, plan the robot flow from the pit area to the competition area. If they are in two separate rooms, a doorway should be designated only to be used for drive team traffic to the competition area.

In this area, you will need the following volunteers:

- Pit Administrator (oversees this area)
- Robot Inspectors
- Field Inspectors
- Queuers
- Practice Area supervisor
- Floaters

**Judging Area**

Judging area should be closed rooms set away from the pit and competition areas for privacy or a quiet area with pipe and drape creating separate room spaces. At least one room is needed for the team judging for every 6-8 teams, and then one room for the Judge’s Deliberation and final decisions. The sample schedule in Appendix J will require three rooms.

Teams should not expect to run a video or have access to power during their Judging session.

In this area, you will need the following volunteers:

- Judge Advisor (oversees this area)
- Judges
- Judge Assistant(s)
- Queuers to bring teams to their Judging appointments, if you have enough volunteers

Judges will need various supplies, including: pens/pencils, paper, and clipboards.
Volunteer and Food Areas
Providing a space for your volunteers to leave their personal belongings, get a drink (water and coffee are a must!) or snack, and put their feet up is ideal. In addition, teams will need to eat, so having a space to do that and providing food is necessary or build time into the schedule to break so teams can go and acquire food off-site. You may choose to have a separate cafeteria for teams (ideal as it contains the mess). You might also consider having a food vendor near the competition area for the audience. Be sure to check with the venue to ensure food is allowed and if there are any restrictions such as where food is allowed, specific vendors you must use, or products you must use. Both areas will likely need an increase in garbage and recycling receptacles for the event day.

In this area, you will need the following volunteers:

- Floaters (if you have enough volunteers on the day of the event)

---

**Volunteer and Food Areas**

Volunteer Lounge

Food Area
Volunteers

We suggest that even for small events, you enlist the help of a Volunteer Coordinator to recruit, verify, and assign volunteers. The Volunteer Coordinator Manual has the details on which roles are required for your event type. If you are filling the role of Volunteer Coordinator as well as Tournament Director, the Volunteer Coordinator Manual should be considered required reading.

The Organization Chart listed below should be used as a staffing guideline. Your event may require all, or only some of these roles.
Suggested Tournament Organizational Chart

Figure 1 - League Championship, Qualifying Tournament, Championship Tournament Organization

Figure 2 - League Meet Organization

Learn more about the roles of volunteers on our Volunteer Resources page, “Volunteer Role Description”.

FIRST® Tech Challenge Tournament Director Guide

Revision 1: 07.2019
**Event Day Volunteers**

The following chart lists the kind and quantity of volunteers needed to run a Qualifying Tournament. Asterisks indicate those positions that require FIRST Tech Challenge Training and Certification.

The following list is merely a suggested list, and every event will have different needs. Furthermore, some of these positions can be “doubled-up”: Robot and Field Inspectors can serve as Referees and FTAs; DJs can be Game Announcers and Emcees.

Ideal student/walk-on volunteer positions are indicated with an @. For a detailed list of volunteer position descriptions, see the [FIRST Tech Challenge Volunteer Role Descriptions](#) on the firstinspires.org website. League Meets do not use many of these roles, including Judges, Field Reset, Queuers, and Crowd Control.

<table>
<thead>
<tr>
<th>Volunteer Role</th>
<th>Must Have?</th>
<th>12 Team Event Qty Needed</th>
<th>24 Team Event Qty Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control System Advisor</td>
<td>N</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Crowd Control Volunteers®</td>
<td>N</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Disc Jockey</td>
<td>N</td>
<td>iPod</td>
<td>1</td>
</tr>
<tr>
<td>Emcee</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Field Manager</td>
<td>N</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Field Resetters®</td>
<td>Y</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Field Tech Advisor Assistant*</td>
<td>N</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Field Technical Advisor*</td>
<td>Y</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Floaters®</td>
<td>Y</td>
<td>2-4</td>
<td>4-6</td>
</tr>
<tr>
<td>Game Announcer</td>
<td>Y</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Robot Inspectors* (Use Referees)</td>
<td>Y</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Head Referee*</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Judge Advisor*</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Judge Match Observer* (Use Judges)</td>
<td>N</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Judges*</td>
<td>Y</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Lead Robot Inspector*</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lead Queuer</td>
<td>N</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lead Scorekeeper*</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lead Field Inspector* (Use FTA Assistant(s))</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Load-In/Setup Crew®</td>
<td>Y</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Load-Out/Tear Down Crew®</td>
<td>Y</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Photographer/Videographer®</td>
<td>N</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pit Administrator</td>
<td>N</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pit Announcer</td>
<td>N</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pit Manager</td>
<td>Y</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Public Relations Manager</td>
<td>N</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
**Queuers/Pit Runners®**  |  Y  |  2-4  |  2-4  
Referees* (Robot Inspectors) | Y | 4  | 8  
Scorekeepers* | N | 1  | 1  
Field Inspectors* | Y | 2  | 4  
Team Registration® | Y | 1  | 1  
Technical Help Desk Volunteer | N | 1  | 1  
Wi-Fi Technology Advisor | N | 1  | 1  

### Volunteer Coordinator

A dedicated Volunteer Coordinator is a must-have for any FIRST event. Our suggestion is that you fill this position first (as soon as possible, in fact!) and then they will help recruit your other key volunteers. While you may plan to wear this hat as well as Tournament Director, it is important that you DO NOT; the reality is that both roles are too much for one person to handle well. A Volunteer Coordinator manual and other volunteer training manuals can be found on the FIRST Tech Challenge Volunteer Resources webpage and through the Schoology system. Once your Volunteer Coordinator is assigned, they will receive an email with Schoology access information.

### Volunteer Coordinator Traits

Most importantly, as representatives of FIRST, Volunteer Coordinators are vital and visible leaders in the community. They must understand and exemplify Gracious Professionalism, through FIRST’s core values. The Volunteer Coordinator can network with like-minded professionals. Responsibilities of the role include the following:

- Participation in tournament Planning Committee meetings.
- Plan and implement activities for volunteer recruitment, selection, registration, support, and recognition.
- Ensure that Key Volunteers are recruited, registered, screened, and certified.
- Ensures that events are staffed with enough volunteers.
- Supervise and assist event volunteers on site.

### Volunteer Coordinator Time Commitment

Time commitments can vary depending on experience, working arrangements with the Affiliate Partner, and the size of the event. Below is an approximated amount of time you may spend on staffing for an event:

- 3 to 6 months before the event – about 6 hours a week.
- 2 to 3 months before the event – about 10 hours a week.
- 1 month before and up to the event – Up to 20 hours a week.

### Teams

Communication with teams is key. Teams will need to know what to do, how to register, what to bring, where to go, and what to expect. The timeline below is a guideline to the types of information to share with teams, and when you should start sharing it.

<table>
<thead>
<tr>
<th>Task</th>
<th>7 – 8 Months Before</th>
<th>4 - 6 Months Before</th>
<th>2 - 3 Months Before</th>
<th>1 - 2 Months Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event announcement and registration process finalized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration opens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmation email to registered teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pre-event communication email with event details include:
Promote and Compass Award submission process (if applicable)
Event Day packets prepped
Event results reported
Thank you email to teams

**Advancement Criteria**
The number of teams each Qualifying or League Championship Tournament will advance is dependent upon how many Qualifying Tournaments or League Championships feed into the Championship Tournament, and how many teams the Championship Tournament can accommodate. Teams must be advanced in the sequence shown in section 7.0 of the FIRST Tech Challenge Game Manual Part 1: Advancement Criteria. The use of official advancement criteria is not optional. Affiliate Partners will notify Qualifying and League Championship Tournament hosts of the number of teams advancing from their event. The number of teams that a State or Regional Championship Tournament will advance is determined by FIRST. FIRST Tech Challenge Partner Services Managers will notify the Affiliate Partner of their advancement numbers. The scoring system helps calculate advancement criteria at your event.

Please note that Tournament Directors, Judge Advisors or Affiliate Partners may not alter the official advancement criteria. A first, second and third place Inspire Award winner must be named. Judging decisions may not impact the advancement of teams who have earned their way through competition play.

**Registration & Fees**

**Team Registration**
Once your event date and time are set, the Affiliate Partner will inform FIRST Tech Challenge of the official event dates and details. Registration should open 2-3 months prior to the event and close two weeks before the event. Registration applications should solicit detailed information from teams, including the cell phone number for one adult that will be traveling with the team.

The Affiliate Partner is responsible for making sure that only those teams registered with FIRST Tech Challenge compete in the official events within their region. Registration priority is often given in the following order (teams must register before the registration deadline):

- In-State/Region teams who have not competed or registered in another Qualifying Tournament.
- In-State/Region teams.
- Out of State/Region teams who have not competed or registered in another Qualifying Tournament.
- Out of State/Region teams.

If an event organizer allows teams from another region to participate in their event, those teams must be allowed to advance from the event. This should be a consideration when deciding to allow or not allow teams from outside of a region to participate.
Team Registration Fees
Affiliate Partners determine the event registration fees for their regions. Some regions collect team registration fees for events at the region or state level and distribute goods, services, or a set amount of financial support to each event. Other regions require League Championship and Qualifying Tournaments to raise all the funds necessary to run the events. Your region’s requirements will determine your budget and the amount of fundraising you will need to do.

Team Registration System
NORTH AMERICA ONLY
In the Team Registration System, the Main Contact (Lead Coach 1) for the team can invite parents of student team members to join the team. This email invite will prompt the parent to create an account via Youth Team Member Registration. The parent creates an account, can sign the consent and release form, and a separate account can be created for the student (13 and older). The Main Contact (Lead Coach 1) can access the roster of registered team members in the “Manage Roster” page from their Dashboard at www.firstinspires.org. This screen displays contact information from the Youth Team Member Registration including: youth team member and parent name, their email addresses and phone numbers, youth team member application status, FIRST Consent and Release Form status, and date completed. This information constitutes the Team Roster which is required for official FIRST events and competitions, including kickoffs. Tournament Directors must gather completed team rosters from the mentors at events and send them to FIRST.

Communication
It is important to communicate regularly with your teams from the moment they register for your event until after your event. Decide who will be the main point of contact with teams after they have been assigned: The Tournament Director or another Team Committee member. This person should be in touch with teams to ensure they have submitted their Team Roster from their Team Registration Dashboard, to share important facts about the event including schedule and Awards (see Promote and Compass Award below), and to confirm their participation as the event day nears.

Be sure to communicate everything teams, volunteers, VIPs, and spectators need to know. Consider the following items for your event website or your confirmation emails:

<table>
<thead>
<tr>
<th>o Event Date &amp; Time</th>
<th>o Nearby Restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Location Address</td>
<td>o Local Hotels</td>
</tr>
<tr>
<td>o Map</td>
<td>o Event Contact Information</td>
</tr>
<tr>
<td>o Schedule</td>
<td>o Sponsors</td>
</tr>
<tr>
<td>o Team Registration Information</td>
<td>o Volunteer Sign-up Instructions</td>
</tr>
<tr>
<td>o Lunch Options</td>
<td>o Consent and Release Forms and Team Rosters (see Team Registration System, above)</td>
</tr>
<tr>
<td></td>
<td>o List of what to bring</td>
</tr>
</tbody>
</table>

Pre-Event Communication with Teams
- Advertisement of the event and open registration
- Registration materials
- Registration complete
- Event schedule and instructions
- Special Awards instructions (if applicable; see below)

Optional Awards
FIRST Tech Challenge offers several optional awards, including the Judges’ Award, Promote Award, and Compass Award. Review the Awards listed in Game Manual Part 1, and discuss the Region’s Awards with your Affiliate Partner to determine what you will distribute. Communicate clearly to the teams the Awards which will be given at your event.

Event Day Communication
- Team check-in and load-in instructions
- Venue-specific accessibility information
- Schedule of the day
- Required documents

Team Thanks
Make sure to send a thank you note to your teams. This could include the event results, and information about upcoming events.

Volunteer Coordinators typically send thank-you notes to volunteers. It is a great way to appreciate their time and efforts and share upcoming volunteer opportunities.

Event Day
The following is a typical event day schedule for a 12-team event. Larger event schedules will look a little different, with additional time added for judging and inspection, and additional time added for matches.

Sample Event Day Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00am</td>
<td>Volunteer Check-In begins</td>
<td>Be prepared to respond to early arrival teams</td>
</tr>
<tr>
<td>7:00am</td>
<td>Team Check-In begins</td>
<td></td>
</tr>
<tr>
<td>7:00am</td>
<td>Team Load-In</td>
<td></td>
</tr>
<tr>
<td>7:00am</td>
<td>Robot Inspection</td>
<td>Budget time for all teams, including the last teams through to pass Inspection. Time for practice matches, on a first come-first served basis (this is optional, and the event organizer may choose to allow teams a practice match at the same time they are completing the Field Inspection).</td>
</tr>
<tr>
<td>7:30am</td>
<td>Judging</td>
<td>Schedule each team 20 minutes to complete Judging Interviews.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Judging sessions MUST be completed prior to scheduled matches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Judging sessions MUST be at least 10 minutes long</td>
</tr>
<tr>
<td>10:00am</td>
<td>Drivers Meeting</td>
<td>Have teams competing in first 2-3 matches bring robots to meeting to place on the field/queue up immediately after the meeting; approximately 30 minutes long</td>
</tr>
</tbody>
</table>
### Opening Ceremony
- Approximately half an hour long

### Qualifying Matches
- 11:00am
- Your schedule should account for 8 minutes minimum each match, and longer if your event is earlier in the season, with one competition field.
- Time will vary based on number of teams competing at the event.
- Calculate match time by using the Match Time Calculator.

#### Notes:
- Send to lunch to facilitate smooth transitions

### Alliance Selection
- 2:00pm
- Approximately 15-30 minutes long. An event with 20 teams or less will have 2 team alliances in the semi-finals and final rounds. An event with 21 teams or more will have 3 team alliances in the semi-finals and final rounds.

#### Notes:
- An event with 20 teams or less will have 2 team alliances in the semi-finals and final rounds. An event with 21 teams or more will have 3 team alliances in the semi-finals and final rounds.

### Logistics

The following list reviews the flow of the day and details important notes and reminders:

- Volunteers should arrive an hour before you plan to allow teams to check in.
  - Assign volunteers and make certain they understand their roles.
- Teams arrive to register, set up tables in the pit, and get some practice rounds in before their qualifying matches begin.
- Teams should receive Judging schedule in advance of competition or may be assigned a judging and inspection time when they arrive on-site.
- Judging Sessions and Robot Inspections must occur before qualification matches begin. Create schedules and assign teams to specific times for both Judging and Inspection to ensure that all teams don’t show up to get these done at the last minute, delaying the start of Opening Ceremonies and the qualifying matches. When scheduling Judging, remember that Judges will want time to interview teams and then make their notes. 30 minutes between appointments is ideal. Teams must have at least a 10-minute interview. When scheduling Inspection, make sure to reserve a large (30 minutes at least) block of time at the end of the Inspection timeline just for repeat Inspections. Sample Inspection schedules are available in Appendix J.
- Hold a Drivers Meeting in the morning, after Judges interviews are completed, but before opening ceremonies.
• Run your match schedule in the morning, after your teams have checked in and when you are certain they will pass software and hardware inspection. FIRST Tech Challenge competitions do not allow for 'substitute' teams. A match schedule that has been generated the night before the event may include matches for a team that does not show up for your event, leaving their scheduled Alliance Partners at a disadvantage.
  o Teams compete in not fewer than 5 and not more than 6 Qualifying Matches
  o The scoring system allows for match lists to be run without times. We recommend that you run your match list without times and queue your teams according to match number.
• Plan enough room in your schedule to allow for small delays.
• Elimination round formats are mandatory and must follow the guidelines provided in section 5.10 of the Game Manual Part I: Tournament Day Overview.
• Official FIRST Tech Challenge Awards are mandatory, and the Judging guidelines provided in the Judges Manual must be followed.
• Announce early in the day and again at the beginning of Alliance Selections the criteria for teams to advance to the next level of events.
• Check in with your key volunteers often.
• Make sure that your volunteers have water.
• Make sure that your volunteers take breaks and eat.
• Make sure your key volunteers have access to the event support numbers at FIRST, in case of questions or concerns. These are located in Appendix A

Event Setup
One to two weeks prior to your event, you will want to ensure that you have collected all the necessary items and printed any materials. Much of the event day setup should happen the night before your event if you are starting early in the morning. Key Volunteers are responsible for setting up the playing field, playing field electronics, etc. Additional volunteers will help set up the pits, check-in areas, food areas, tape down cords, hang signs, etc. Please reference Appendix G: Setup Checklist.

Static Mitigation
While much of static mitigation depends on the Robot design, build, and wiring, location plays an important factor, as well. In climates with humidity less than 45%, prepping the field to reduce static is recommended. The Affiliate Partner will determine what, if any, steps their region is taking and Qualifying and League Championship Tournament organizers will be expected to follow those guidelines for consistency among the events in your region. Teams must be able to anticipate and expect to encounter the same Field setup and preparation at every event they attend in a region. For more information, refer to Appendix M: Recommendations for Static Mitigation.

Printing Needs
In addition to field elements and electronics, tables and chairs, there are a number of reference materials you will need. Please reference Appendix F: Printing Checklist

Signs
Directing volunteers, teams, and guests on the day of the event is essential to ensuring you stick to the event day schedule. Depending on how your Venue is setup, attendees will need instructions of varying amounts. Appendix K: Sign Templates can be modified with the details of your event, printed, and posted throughout the Venue. You will want to consider signs for the following: Parking Robot Load-In

- Pits
- Pit Table Team Numbers
- Volunteer Registration
- Team Registration
- Pit Administration

Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Robot Inspection
Field Inspection
Judging Rooms
Bathrooms
Cafeteria/Food areas
Volunteer Lounge/Food area
Technical Help Desk
Queueing Path
Robot Path – NO SPECTATORS
Competition Area
Safety Glasses REQUIRED

Registration
Volunteers will need to check-in bright and early. All North American volunteers must be pre-screened through Volunteer Registration. If you have a walk-on volunteer, follow the instructions in the FIRST Walk On Event Volunteer Policy and Application.

Having coffee, water, or a light breakfast or snacks is critical to keep volunteers fueled.

Upon check-in, Volunteers receive the following:

- Volunteer T-shirt (if available)
- Meal Voucher (if applicable)
- Name tag
- Registration packet

Upon check-in, Teams need to provide copies of their team contact information and (North America only) Team Roster, payment (if applicable), Emergency Contact Info, with signed Consent & Release forms for each team member, Mentor, and Coach not listed officially listed on the Team Roster, before receiving the following:

- Registration packet (See Appendix H: Event Day Registration Packets)
- Event T-shirt (if applicable)

PR/Media/VIPs
If you have invited special guests, the media, or have a professional photographer/videographer on-site for your event, prepare a plan ahead of time of who will be meeting them, providing a tour or instructions, etc. You want to look polished and professional for everyone, but especially for your invited guests, and being prepared is the best way to do so.

Safety

Safe Set-Up
Prior to the event, walk around and ensure that all areas are safe and accommodating for all volunteers, teams, and guests. Anything on the floor should be taped down or moved out of Queueing paths and aisles. All exits and fire doors must be clear.

Safe Dress
Safety glasses and close-toed shoes are required of anyone at or near the pits, practice field, and playing field. This includes teams, volunteers, and spectators. Provide safety glasses to your volunteers, EMTs, and special
guests or VIPs. It is the responsibility of the Tournament Director to provide safety glasses for event volunteers.

**Guidelines for Lost Children**

FIRST Tech Challenge events can be very hectic, as there are many different parts of the event happening all at once (i.e. Judging interviews, Robot Inspections). It can be easy for a child to get lost in the shuffle of a busy event. It is important to come up with an action plan in the instance of a lost child. There are resources available to help guide you in creating an action plan:

- [http://www.missingkids.com/ourwork/publications](http://www.missingkids.com/ourwork/publications)
- Code Adam Guidelines: [codeadam.missingkids.org](http://www.missingkids.com/ourwork/publications)

Collecting phone numbers from each coach will also be helpful if a child becomes separated from their team. Ask each Coach/Mentor at Team Registration for their contact information, preferably a cell phone, in case you are approached by a child who is unable to locate their team.

**Food**

Qualifying Tournaments are whole-day events and volunteers, teams, and guests will require food and drink. If your venue allows it, plan to have a lunch break on-site and communicate with teams what they must do for their meal. Providing meals for volunteers is expected. If the Venue does not allow for food, you must provide adequate time in the schedule for volunteers, teams, and guests to go and eat. Be sure that your registration materials collect information about allergies and dietary restrictions, especially for volunteers.

**Ceremonies and Awards**

League Tournaments, Qualifying Tournaments and State and Regional Championship Tournaments are required to provide recognition for the required FIRST Tech Challenge Awards. There are a set of awards which must be given at each tournament. Trophies may be standardized in your region as well. Affiliate Partners will determine the style of trophy for League Championship and Qualifying Tournaments within their region. State and Regional Championship Tournaments must order the official, approved trophies and medals from Crown Trophy. Please refer to Schoology for instructions and ordering forms.

**Awards Ceremony Script**

It is important that FIRST Tech Challenge Awards Ceremonies are similar in style and include all the same information. Use the Award Ceremony script found in the FIRST Tech Challenge Tournament Director section of the FIRST website.

**After the Event**

In addition to congratulating yourself and your Tournament Planning Committee on a job well done, here is a list of tasks that will need completing post event:

- Generate Lessons Learned doc (see below) before, during, and after the event
- Provide scoring system files to FIRST
- Email event results to your Affiliate Partner
- Email results to teams in your area
- Return rented or borrowed items
- Send thank you letters to VIPs, sponsors, volunteers, venue, hosts
- Send thank you emails to coaches and teams
Return completed forms to FIRST, including: Consent and Release forms, Conflict of Interest forms; Medical Incident Reports, and non-Medical Incident Reports.

Finalize the budget results

Request feedback (see Surveys below)

Schedule meeting(s) to convene planning for next year’s event

Be sure to send the results to firsttechchallenge@firstinspires.org. We want to know about your event!

Lessons Learned
It is never too soon to be collecting information to help you improve the organization and execution of your event. Especially on event day, take notes about what worked, what issues arose, and ideas for improvement. Keep all your notes in one area, like a Word document, and add throughout event planning and implementation. Add survey feedback and takeaways from formal and informal conversations with folks to the list, especially your Key Volunteers, and then review it prior to beginning work and during the following year’s event planning process.

Surveys
Within two to four weeks’ post-event, you should request feedback from your Tournament Planning Committee and subcommittees, as well as teams. What are some lessons learned from this event and how can you improve in the future? This can be done formally, through a survey or evaluation, or informally in conversations. Take notes and review them when you begin planning the next year’s event.

Using an online survey tool (SurveyMonkey.com is free and easy to use) to collect formal feedback from volunteers and teams will help you to improve future events. It’s also a great way to collect some simple information to track year to year which might be needed by your sponsors, etc.

Feedback
We strive to create support materials that are the best they can be. If you have feedback about this manual, please email firsttechchallenge@firstinspires.org. Thank you!
Appendix A – Resources

**Game Forum Q&A**
Anyone may view questions and answers within the FIRST Tech Challenge Game Q&A forum without a password. To submit a new question, you must have a unique Q&A System User Name and Password for your team.

Volunteers that apply for a specific volunteer role will receive an email from [FTCTrainingSupport@firstinspires.org](mailto:FTCTrainingSupport@firstinspires.org) with their username and password to the forum. You will receive access to the forum thread specific to your role.

**FIRST Tech Challenge Game Manuals**

**FIRST Headquarters Pre-Event Support**
Phone: 603-666-3906  
Mon – Fri  
8:30am – 5:00pm  
Email: Firsttechchallenge@firstinspires.org

**FIRST Tech Challenge Event On-Call Support**
These numbers are available for event personnel only. Please **do not** call these numbers if you are a team looking for a ruling, a decision, or assistance. We trust that you will not misuse this resource.

Day of Event Robot Control System Support: 603-206-2450  
All other Day of Event support: 603-206-2412

**FIRST Websites**
*FIRST homepage* – [www.firstinspires.org](http://www.firstinspires.org)  
*FIRST Tech Challenge Page* – For everything FIRST Tech Challenge.  
*FIRST Tech Challenge Volunteer Resources* – To access public Volunteer Manuals.  
*FIRST Tech Challenge Event Schedule* – Find FIRST Tech Challenge events in your area.

**FIRST Tech Challenge Social Media**
*FIRST Tech Challenge Twitter Feed* - If you are on Twitter, follow the FIRST Tech Challenge Twitter feed for news updates.  
*FIRST Tech Challenge Facebook page* - If you are on Facebook, follow the FIRST Tech Challenge page for news updates.  
*FIRST Tech Challenge YouTube Channel* – Contains training videos, Game animations, news clips, and more.  
*FIRST Tech Challenge Blog* – Weekly articles for the FIRST Tech Challenge community, including Outstanding Volunteer Recognition!  
*FIRST Tech Challenge Team Email Blasts* – contain the most recent FIRST Tech Challenge news for Teams.

**Feedback**
We strive to create support materials that are the best they can be. If you have feedback about this manual, please email [firsttechchallenge@firstinspires.org](mailto:firsttechchallenge@firstinspires.org). Thank you!

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**Gracious Professionalism®** - “Doing your best work while treating others with respect and kindness - It's what makes FIRST, first.”
Appendix B: Letter from FIRST Tech Challenge Engineer to Venue IT Staff

How to use this Document

You will need to communicate with the venue early on about the field electronics Wi-Fi needs and what that means for the venue's Wi-Fi environment. Please provide the venue with the following letter from FIRST Tech Challenge engineer Thomas Eng to the venue regarding the Wi-Fi needs of the event and what is needed from the venue. A copy of this letter is also available in Schoology.

Letter

To Whom It May Concern:

The FIRST Tech Challenge is a robotics competition where students build robots that “play a game” on a 12’x12’ field. The students control their robots remotely using wireless technology. At the competition, each robot will establish its own private Wi-Fi control network (2.4GHz or 5GHz band).

Your facility will be hosting a tournament on <SPECIFY DATES>.

The wireless control systems that will be used during the tournament can be affected by wireless interference from other devices that are operating on or near the same frequency. In order to avoid interference and to ensure the safe and responsive control of the robots, the Tournament Director is requesting that any wireless networks in the vicinity of the competition and/or practice fields be temporarily disabled.

If it is not possible to disable the wireless networks, the Tournament Director is requesting that these networks be moved to a single Wi-Fi channel. Moving the networks to a single channel will make it easier for teams to avoid interference by selecting an operating channel that does not overlap with the venue’s preferred Wi-Fi channel.

Temporarily disabling or moving conflicting wireless networks will help minimize the amount of wireless interference at the event. This is important to help ensure the safe control of the robots.

Also, if there are any Wi-Fi suppressors present in the venue, the Tournament Director is requesting that these Wi-Fi suppressors be disabled for the duration of the tournament. Note that the FCC has ruled that such Wi-Fi suppression/blocking devices are prohibited under federal law (see https://www.fcc.gov/document/warning-wi-fi-blocking-prohibited).

Please do not hesitate to contact me if you have any questions regarding these requests. Thank you for your consideration regarding this upcoming FIRST Tech Challenge event.

Sincerely,

Thomas Eng
FIRST Tech Challenge Engineer
firsttechchallenge@firstinspires.org
Appendix C: Scholarship and Alumni Information

FIRST® Alumni and FIRST Scholarships
Core Messages
www.firstinspires.org/alumni
www.firstinspires.org/scholarships

FIRST Alumni Core Messages

- FIRST® prepares students for life beyond high school
  o By participating in FIRST programs, FIRST Alumni gain skills and attitudes needed in today’s workforce, including problem-solving skills, teamwork, innovative thinking, creative thinking, perseverance, and leadership.
  o FIRST Alumni stand out to potential employers. They are innovative, leaders, and ready to hire. They have gone on to specialize in engineering, science, education, media, mathematics, theater, film, marketing, business, finance, health, art, communications, medicine, ecommerce, politics, technology, and much more.
  o FIRST Alumni have access to networking opportunities, internships and jobs, community, inspiration, and more through FIRST.
  o FIRST helps alumni of FIRST programs take the next step, reach for the next breakthrough, and take their dream and see it through. No matter their dream, FIRST helps them get there.

- FIRST Alumni belong to a global, lifelong community.
  o FIRST Alumni are part of a network of innovators, changing the world one dream at a time.
  o Alumni of FIRST programs are critical to advancing our mission across the globe.
  o FIRST Alumni are encouraged to give back by volunteering, mentoring, donating, recruiting, and spreading the mission of FIRST.
  o Nearly half of FIRST Alumni are still involved in FIRST as coaches, mentors, volunteers, and donors.

- FIRST isn’t something you do; it’s something you are.
  o FIRST Alumni are confident, inspiring, driven, and unstoppable. They are FIRST.

FIRST Scholarship Program Core Messages

- High school student participants of FIRST® Robotics Competition and/or FIRST® Tech Challenge programs are eligible to apply for more than $80 million in scholarship opportunities through the FIRST Scholarship Program.
  o FIRST Scholarships are not funded or administered by FIRST.

- FIRST Scholarship Providers agree FIRST Alumni have the necessary skills to succeed in college.
  o Colleges, universities, corporations, and associations support the mission of FIRST by making available FIRST Scholarships to FIRST participants and alumni who are ready to take the next step toward becoming leaders in their fields.
  o Colleges, universities, and employers recognize the value of the FIRST experience. They recognize that FIRST team members are passionate about science, technology, engineering, and math (STEM), and

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that FIRST students develop critical 21st century life skills including problem solving, time management, teamwork, and the appreciation of diverse, inclusive, and equitable communities.

- Receiving a FIRST Scholarship can have a big impact on deciding which college to attend or whether or not it’s affordable.

**FREQUENTLY ASKED QUESTIONS**

**Who are FIRST Alumni?**
- FIRST Alumni are graduates of high school-level FIRST programs (i.e. FIRST Tech Challenge and/or FIRST Robotics Competition).
- FIRST participants automatically become FIRST Alumni after graduating high school.
- FIRST Alumni are 2.6 times more likely to enroll in an engineering course freshman year of college.
- Over 75% of FIRST Alumni are in a STEM field as a student or professional
- Nearly half of FIRST Alumni are still involved in FIRST as coaches, mentors, and volunteers, and donors.
- More information about FIRST Alumni, along with internship and networking opportunities, can be found at [www.firstinspires.org/alumni](http://www.firstinspires.org/alumni).

**Who is eligible for a FIRST Scholarship?**
- High school students who have participated or are participating on high-school-level FIRST Robotics Competition and/or FIRST Tech Challenge teams can apply for FIRST Scholarships.
- Most FIRST Scholarship Providers request applications during a student’s senior year, but there are a few scholarships available to juniors or college students.
- Each scholarship may also have other eligibility requirements as set by the provider. Eligibility requirements are available at [www.firstinspires.org/scholarships](http://www.firstinspires.org/scholarships).

**How does the FIRST Scholarship Program work?**
- FIRST Scholarships are offered and administered by the scholarship providers. Scholarship providers are primarily four-year colleges and universities, but also include community colleges, technical schools, corporations, and associations.
- Most FIRST scholarships are merit-based scholarships and may be renewable each year by maintaining an acceptable academic average. Each scholarship is unique and has its own award amount, eligibility requirements, application requirements, and application deadline.
- Most applications are due between December and April of the last year of high school/12th grade, but applicants should pay close attention to individual deadlines. Each FIRST Scholarship has its own application process and may require an essay and/or a recommendation letter from a mentor or coach.
- Most opportunities are made available each year, so future applicants should become familiar with the opportunities in the program in preparation to apply during their eligible year.
- Opportunities, applications, and details about available scholarships can be found at [www.firstinspires.org/scholarships](http://www.firstinspires.org/scholarships).
Alumni and Scholarships presence will vary from one event to another, based on available space, contract restrictions, and the number of scholarship providers. This first section describes the basic presence that is requested at a minimum at all FIRST Tech Challenge events. The second section describes guidelines for hosting a “Scholarship Row” within events if possible.

ALL FIRST Events will:

- Provide FIRST Alumni/ Scholarship Program literature to students, parents, and other visitors at a designated FIRST Scholarship table near the main entrance door.
  - Materials provided to all events at no cost to event organizers
- Information about FIRST Alumni and Scholarship Programs will be included in the event script, and the FIRST Alumni video should be shown.

Suggested Materials order at http://d3cms.com/firstmarketing/Login.aspx:
- League Meets, Tournaments and Qualifiers
  - 50 Alumni/ Scholarship Brochures
  - 50 Alumni Scholarships Cards
  - 50 Scholarships Stickers
  - Alumni/Scholarships Banner (distributed to each Partner Nov 2016)
  - Alumni/Scholarships Tablecloth (distributed to each Partner Nov 2016)
- Region/State Championship
  - 100 Alumni/ Scholarship Brochures
  - 100 Alumni Scholarships Cards
  - 100 Scholarships Stickers
  - Alumni/Scholarships Banner (distributed to each Partner Nov 2016)
  - Alumni/Scholarships Tablecloth (distributed to each Partner Nov 2016)

Set-up the FIRST Scholarship Program Materials

- Set up Alumni/ Scholarship table in high Parent and Participant traffic area
  - Tip: Not necessarily the entrance
- Cover table with FIRST Alumni/ Scholarship Tablecloth
- Set up the FIRST Alumni/ Scholarship Stand up Banner (according to included instructions) in a visible area near table
  - Tip: Make sure both sides are visible to passersby
- Place half of you Alumni Scholarship Brochures on table for handouts.

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Tip: retain the other half to replenish later in the event.

- Place half of the Alumni/ Scholarships Cards on table for handouts.

Tip: retain the other half to replenish later in the event

**Staff the FIRST Scholarship Program Table**

- Remain at the table or have a volunteer assigned to talk to students about FIRST Scholarship Opportunities and FIRST Alumni Relations
- See “Talking to Students about FIRST Alumni Relations & Scholarships” for information.

**Pack Up Scholarship Table** (At the end of the event):

- Pack tablecloth and banner for use at future events
- Partners may request replacement or additional tablecloths/banners by emailing alumni@firstinspires.org

**Talking to Students about The FIRST Scholarship Program and FIRST Alumni Relations**

Before manning the FIRST Alumni/ Scholarship table, look at the materials:

- The FIRST Alumni/ Scholarship Brochure provides general information about the FIRST Scholarship Program, and FIRST Alumni Relations.
- Inform any table visitors that up-to-date scholarship information – current Providers and all the details/application – can always be found at www.firstinspires.org/scholarships.
- The FIRST Alumni/ Scholarships Card is a quick reference for the FIRST Scholarships Program and FIRST Alumni Relations.
- All Alumni information can be found at www.firstinspires.org/alumni - also share information on any local initiatives that may be going on!

You won’t be able to answer all questions – that’s OK!

By just talking with students (and parents) about the FIRST Scholarship Program and FIRST Alumni Relations you are increasing the chances that a student will apply for and perhaps win a scholarship, and/or stay involved with FIRST after they graduate from high school! **This is a fun job – enjoy it!**

The main messages to get across are:

- **Use the FIRST Scholarship Website:** The most up-to-date list of scholarships and all the details, including how to apply for each scholarship, are on our website at www.firstinspires.org/scholarships and www.firstinspires.org/alumni.

- **Plan ahead:** Freshmen, Sophomores, and Juniors should be looking now and making plans for coming years. Pay attention to scholarship application deadline dates. Most FIRST Scholarship Providers renew year over year, so now is a good time to familiarize themselves with what is available

- **Some Scholarships may still available for Seniors:** There are still some scholarships available for Seniors, encourage them to go to www.firstinspires.org/scholarships **RIGHT NOW**

- **FIRST does not give away scholarships!** FIRST Scholarship Providers (schools, companies etc.) make scholarship opportunities available to students who have participated in FIRST. FIRST makes the connection between Providers and Participants/alumni. If there are particular questions about a scholarship, the best person to ask is the Provider contact (those can be found at www.firstinspires.org/scholarships )
FIRST® ALUMNI AND FIRST SCHOLARSHIPS

“SCHOLARSHIP ROW” AT EVENTS

To encourage awareness of the FIRST Scholarship Program and the opportunities in higher education, as well as to steward current Scholarship Providers, Tournament Directors are invited to offer FIRST scholarship providers a display table to present materials at their event. All Tournament Directors are invited to host a Scholarship Row within their event; however, guidelines and restrictions are noted below.

- Events interested in hosting a Scholarship Row event at their event should inform FIRST Alumni Relations as soon as possible(scholarships@firstinspires.org).
  - Knowing which regions are planning to hold a Scholarship Row will allow us to provide additional resources and support.
- Tournament Directors, or designee, is responsible for inviting local scholarship providers to participate, coordinating and monitoring scholarship tables at their event, and working closely with the event management team.
  - FIRST Alumni Relations will provide Scholarship Provider contact lists to Partners in late Fall/early Winter
  - Tournament Directors by requesting this list at any time by emailing scholarships@firstinspires.org
- What the event can accommodate will be determined by contracts in place and space considerations. If an event does not have the space for scholarship tables, or the contract with the venue does not allow this type of promotion, that event will not have a Scholarship Row. Bronze level FIRST Scholarship Providers (total yearly value of $20,000+) or higher-level providers are ‘entitled’ to invitations to available Scholarship Rows, however the decision on who to invite/not is at the sole discretion of the Partner or his/her agent.
  - Find all FIRST Scholarship Provider benefits at http://www.firstinspires.org/resource-library/scholarship-providers
  - Should you encounter any issues, please contact Michelle Long at mlong@firstinspires.org

FIRST Championship Innovation Faire Scholarship Row

- Championship Scholarship Row recognition are privileges reserved for schools/organizations that are silver level (total yearly value of $40,000+) or higher providers.
- Invitations to display at the Championship are managed by FIRST Headquarters and should not be part of any local conversations
- Should you have any questions about the above guidelines, please reach Michelle Long at mlong@firstinspires.org

Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Policy regarding FIRST Scholarship Rows

FIRST Scholarship Rows are optional ‘college fair’ events held within official FIRST events to showcase individual FIRST Scholarship Providers and the FIRST Scholarship Opportunities they make available to FIRST Participants.

FIRST Scholarship Row within official FIRST events should be limited to current and official FIRST Scholarship Providers¹. FIRST Scholarship Providers at the Platinum, Gold, Silver, and Bronze level should be invited to attend FIRST Scholarship Rows as space allows. Invitation of Brass level FIRST Scholarship Providers is at the discretion of the Regional Director/ District Contact.

Regional Directors/District Contacts and FIRST Tech Challenge Partners will receive initial contact lists for each official FIRST Scholarship Provider in early November each year, and at least one additional list prior to the start of the next calendar year.

Non-FIRST Scholarship Providers may be included in FIRST Scholarship Rows only under the following conditions:

- Are a true prospective FIRST Scholarship Provider
- Have not attend another FIRST Scholarship Row as a non-FIRST Scholarship Provider within the last 5 years
- Contact information/ introductions are made to the FIRST Headquarters Alumni Relations staff prior to or following the event
- Attendance at the event should be a shorter exhibit time than official FIRST Scholarship providers
  o I.e. Scholarship Row is a two-day event; potential Providers should only attend one day
- Non-FIRST Scholarship Providers should be labeled as such within Scholarship Row

¹ Current and official FIRST Scholarship Providers are defined as those posted to www.firstinspires.org/scholarships
## Appendix D: Area and Supply Needs Chart

This list is for a 12-team (minimum) Qualifier. Numbers should be adjusted as appropriate for larger events.

<table>
<thead>
<tr>
<th>Location</th>
<th>Item</th>
<th>Qty</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration Area</td>
<td>Table(s) for Volunteer Check-In*</td>
<td>1-2</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>Table(s) for Team Check-In*</td>
<td>1-2</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>Table(s) for Sponsor recognition</td>
<td>1-2</td>
<td>Required (can be combined with FIRST Information table)</td>
</tr>
<tr>
<td></td>
<td>Table for FIRST information*</td>
<td>1</td>
<td>Recommended, but optional</td>
</tr>
<tr>
<td></td>
<td>Table for FIRST Scholarship and Alumni info*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) chairs per table</td>
<td>10+</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directional signs</td>
<td>varies</td>
<td></td>
</tr>
<tr>
<td>Competition Area</td>
<td>Playing Field</td>
<td>1-2</td>
<td>Per Field</td>
</tr>
<tr>
<td></td>
<td>Alliance Flags</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Table per Field for Queuing</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Table for Scoring System electronics</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scoring System electronics</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PA/Audio system w/ microphone*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Award presentation area*</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Projection screen*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Projectors*</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stanchions*</td>
<td>Varies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) chairs per table</td>
<td>8+</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directional signs</td>
<td>varies</td>
<td></td>
</tr>
<tr>
<td>Pit Area</td>
<td>(1) Table per Team (with power)</td>
<td>12+</td>
<td>Chairs are optional</td>
</tr>
<tr>
<td></td>
<td>Table(s) for Pit Admin</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computer with Printer</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) chairs per table @ Pit Admin</td>
<td>2-4</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>PA/Audio System with microphone*</td>
<td>1</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>Projection screen*</td>
<td>1</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>Projector*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extra trash/recycling containers</td>
<td>varies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directional signs</td>
<td>varies</td>
<td></td>
</tr>
<tr>
<td>Inspection Area</td>
<td>(1) Table per (2) Inspection stations</td>
<td>2-4</td>
<td>Robot and Field (Robot Inspection can be done by roving inspectors)</td>
</tr>
<tr>
<td></td>
<td>Sizing Boxes</td>
<td>2-3</td>
<td>Robot</td>
</tr>
<tr>
<td></td>
<td>Practice Field</td>
<td>1</td>
<td>Optional – can use comp. Field</td>
</tr>
<tr>
<td></td>
<td>Table for practice Field electronics</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Judging Area**</td>
<td>(1) Table for Judging supplies</td>
<td>3-4</td>
<td>Chairs for Teams are optional</td>
</tr>
<tr>
<td></td>
<td>(2) chairs per table</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dry Erase board/chalkboard</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directional Signs</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>varies</td>
<td></td>
</tr>
</tbody>
</table>
### Volunteer Area**

<table>
<thead>
<tr>
<th>Item</th>
<th>Volunteer Area**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tables</td>
<td>varies</td>
</tr>
<tr>
<td>Chairs</td>
<td>varies</td>
</tr>
<tr>
<td>Extra trash/recycling containers</td>
<td>varies</td>
</tr>
<tr>
<td>Directional Signs</td>
<td>varies</td>
</tr>
</tbody>
</table>

Adequate number to accommodate many Volunteers at once

### Food Area**

<table>
<thead>
<tr>
<th>Item</th>
<th>Food Area**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tables</td>
<td>varies</td>
</tr>
<tr>
<td>Chairs</td>
<td>varies</td>
</tr>
<tr>
<td>Extra trash/recycling containers</td>
<td>varies</td>
</tr>
<tr>
<td>Directional signs</td>
<td>varies</td>
</tr>
</tbody>
</table>

Adequate number to accommodate the expected number of users at any one time

### Parking

<table>
<thead>
<tr>
<th>Item</th>
<th>Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directional Signs</td>
<td>varies</td>
</tr>
</tbody>
</table>

To direct auto, bus, and pedestrian traffic

*Not Required for League Meet events!

**Not used for League Meet events!
Appendix E: Hardware Requirements

For Competition Field
- (1) Laptop computer and mouse for Field Display
  - Using a mouse is highly suggested over using a track pad
- (4) Logitech F310 Game Controllers
  - The Logitech F310 replaced the Logitech Dual Action controllers to function as spares
- (1) Monitor and compatible video cable
  - For Field display
- (1) Set of computer speakers (optional)
  - For Field Display start/stop sounds.
- Extension cables as necessary per Venue to get power to each Field.
- (1) table or cart to hold the Field Display computer/monitor

Scoring System Equipment
- (1) Laptop computer and mouse
  - Windows XP or newer, or Apple OS X 10.5 or newer
  - 1024x768 Resolution Monitor (minimum)
  - A mouse is highly suggested over a track pad
  - Optionally, external, powered computer speakers or audio output wired into the event A/V system
  - Oracle (Sun) Java, version 1.5 or higher
  - Current FIRST Tech Challenge Scoring System software
  - (1) High speed printer or a printer and access to a copy machine.
- (1) Ethernet cable
  - Required if the optional Scoring System network is used (recommended)
  - Long enough to connect the Scoring System laptop to the Scoring System router
- (1) Wi-Fi router
  - Required if the optional Scoring System network is used (recommended)

Scoring System Display Applications Requirements
The following is required for each separate Scoring System display
- (1) Laptop computer
  - Windows XP or newer, or Apple OS X 10.5 or newer
  - Oracle (Sun) Java, version 1.5 or higher
  - FIRST Tech Challenge Scoring System software (same version as on Scoring System laptop)
- (1) Large screen display or projector (Display for Audience)
  - capable of 800x600 minimum resolution
- (1) Large screen display for Match Timer Display (one display per field)
  - capable of 800x600 minimum resolution
  - Speakers
- (1) Ethernet cable
  - Required only if a wired Scoring System network is used
  - Long enough to connect the laptop to the Scoring System router

The latest Google Chrome browser should be loaded on all laptops.
Appendix F: Printing Checklist

Most events need to work offline, so having your resources printed and available on the day of the event will ensure they are easy to access when needed. The following checklist is a checklist of suggested items you need/might want to have on hand and where they will be needed:

<table>
<thead>
<tr>
<th>For Registration and Check-In</th>
<th>Qty.</th>
<th>Printed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict of Interest and Disclosure Statement</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Safety Concern or Non-Medical Incident Report form</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>YPP Medical Incident Report form</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For Pit Admin</th>
<th>Qty.</th>
<th>Printed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Team schedule (Pit use Only)</td>
<td>1 per Team, 1 per volunteer plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Check in Roster</td>
<td>1 for each volunteer at check-in</td>
<td></td>
</tr>
<tr>
<td>Field Inspection Sheets</td>
<td>1 per team plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Robot Inspection Sheets</td>
<td>1 per team plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Legal / Illegal Parts list</td>
<td>1 for every 2 inspectors</td>
<td></td>
</tr>
<tr>
<td>Game Forum</td>
<td>1 for every 2 inspectors</td>
<td></td>
</tr>
<tr>
<td>Game Manual (for reference)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Medical Incident Reports</td>
<td>10-20</td>
<td></td>
</tr>
<tr>
<td>Non-Medical Incident Report</td>
<td>10-20</td>
<td></td>
</tr>
<tr>
<td>Consent and Release Forms</td>
<td>10-20</td>
<td></td>
</tr>
<tr>
<td>One Page Game Overview</td>
<td>2 per team plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Lost Item Sheets</td>
<td>10-20</td>
<td></td>
</tr>
<tr>
<td>Pit Maps</td>
<td>1 per team, 1 per volunteer plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Team Agenda</td>
<td>1 per team, 1 per volunteer plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Spectator Agenda</td>
<td>1 per team, 1 per volunteer plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Team List</td>
<td>1 per team, 1 per volunteer plus 10-20 extra</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For Judges Room</th>
<th>Qty.</th>
<th>Printed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judging schedules for each Room</td>
<td>1 per team, 1 for each judge, plus 5-10 extra</td>
<td></td>
</tr>
<tr>
<td>Judge Advisor Manual</td>
<td>1 for the Judge Advisor</td>
<td></td>
</tr>
<tr>
<td>Judges Manual</td>
<td>1 for each Judging room</td>
<td></td>
</tr>
<tr>
<td>Door Signs for each Room</td>
<td>1 for each Judging room</td>
<td></td>
</tr>
<tr>
<td>Match Observation Sheets</td>
<td>1 per team plus 10-20 extra</td>
<td></td>
</tr>
<tr>
<td>Judges Summary Sheets</td>
<td>1 per team plus 10-20 extra</td>
<td></td>
</tr>
</tbody>
</table>
Appendix G: Event Setup Checklist

Thank you to the Los Angeles region for providing this template.

The Night Before the Event

Pits
- Table setup
- Team # flag build and setup (taping flags to pvc and placing signs on proper tables)
- Field setup
- Caution tape inspection line
- Audio setup (if applicable)
- Pit display setup, wiring from competition area, and temporary breakdown
- Video display setup, wiring from competition area, and temporary breakdown
- Registration setup
- Extension cable layout and taping

Competition Area
- Field setup
- Scorekeeping System setup and checked out
- 1st FIELD NAME and 2nd FIELD NAME (if applicable) signage
- Table setup
- Audio setup (if applicable)
- Camera video setup (if applicable)
- Queuing area taping
- Cable taping
- Tarp intersection taping
- Stanchion and caution tape setup

Volunteer Break Room
- Coffee maker setup
- Non-perishable food setup

Outside
- Caution Tape/Robot walking area
- Post signs
  - Robot drop off
  - Competition area
  - Pits

Morning of the Event (before Opening Ceremonies)

Volunteer Check-in
- This will start very early. Make sure you have name tags plus spares, breakfast and coffee in the volunteer lounge and someone who is responsible for handing out any required manuals (have extra copies of everything!) and instructing “day of” volunteers as to what their duties are.
- Hand out safety glasses to volunteers who will be close to robots.
Registration
- Teams will inevitably show up before the time you designate “Pits open” and ask to setup at their table. Be prepared for this.
- Decide on a cut off time ahead of time for teams checking in. Make sure teams know what time this is, in advance.
- You WILL have teams that don’t show, be prepared with cell phone information for every Team!
- Once you decide all teams that will be coming are there, and will pass inspection, give the final team list to the Scorekeeper.
- Hand out Driver/Coach buttons
- Have extra copies of Consent and Release forms; Teams sign them online, but a few may be needed.

Inspection / Judging
- These are happening together. Your pit runners and pit manager will need to be on top of ensuring teams are getting to their designated locations on time.
- See notes regarding Inspection above.

Competition Prep
- Once the Scorekeeper receives the final team list, the Scorekeeper will generate the match list. Make printed copies to be distributed to the teams, Emcee, Pit Manager, etc.
- 1 hour prior to Opening Ceremonies, everyone who is working the competition area should tag up, led by the Field Manager to discuss how the competition will be run, who is responsible for what, and establish a game plan that will keep match turnover running as fast and as efficiently as possible.
- 30 minutes prior to Opening Ceremonies, the Head Ref will hold a Drivers Meeting that has mandatory attendance by all drivers from each team. Make sure the Pit Manager and Pit Runners are aware of when this is supposed to start so that they can ensure every team is represented.
- Queue first three matches just prior to beginning Opening Ceremonies

**During Competition**

**Opening Ceremonies**
- National Anthem - Make sure you have a flag and either a copy of the National Anthem to play or a volunteer or student to sing it
- Follow Emcee script
- Play Scholarship video
- Play game animation/video
- Play Gracious Professionalism Video

**Qualification Matches**
- Target an 8-minute (or better) turnaround for each match. Longer if using only 1 field.
- Robots on deck should be turned on and paired.

**Lunch**
- Make sure volunteers have time to eat lunch.

**Alliance Selection**
□ Give Teams a 10-15-minute break between Qualification Matches end and Alliance Selection
□ 1 representative from each team must be present in the competition field area before Alliance Selection can start
□ The Emcee reads the Alliance Selection Script, then goes through the selection process. During this time, the Scorekeeper is actively logging the Alliance selections
  □ Keep a handwritten record of alliance picks as a backup, in case the scoring system hiccups.

Semi-Final Rounds
□ These are operated using a best of three method. There will be two match groups (of 2 Alliances each). Alternate which match group is competing to give teams time to recover and reset their robots.

Finals
□ Prior to the final match, the Finalist Alliances will shake hands.

Closing Ceremonies
□ Use the script provided by FIRST. This can be found in the Tournament Director section of the FIRST website.
□ Start with awards, handed out by the Judges. Make sure the correct trophies / medals are handed out for the particular award.
□ Thank your sponsors!
□ Thank your volunteers!
□ Thank your coaches!
Appendix H: Event Day Registration Packets

**Volunteer Registration Packet**
- Thank you letter/gift
- Name Badge
- Meal Voucher (if applicable)
- Event Schedule
- Team List
- Conflict of Interest form
- Items relevant to role (i.e.: Inspection checklists to Inspectors)
- Map of the Venue (if applicable)

**Team Registration Packet**
- Event Schedule
- Team List
- Inspection Schedules
- Driver (2) and Coach (1) buttons
- Meal Voucher (if applicable)
- Map of the Venue (if applicable)
- Pit Map (if applicable)
Appendix I: FIRST and FIRST Tech Challenge Materials

Tournament Directors need materials to promote FIRST Tech Challenge and FIRST. Some of these materials are provided by FIRST, some by the Affiliate Partner, and some by the Tournament Director. The following lists of materials are just a few of the options available to Tournament Directors.

**Banners**
Your Affiliate Partner will have FIRST Tech Challenge -branded banners which they may provide to you for use at your event. Contact them to see if this is an option.

**Hand-Outs**
- Game 1-Page Document
- FIRST Tech Challenge How It Works
- FIRSTTech Challenge At-A-Glance
- FIRST Tech Challenge Accessibility
- FIRSTTech Challenge Inspiring Women
- FIRST Scholarship Brochures
- FIRSTTech Challenge Sponsors
- FIRSTTech Challenge Promotional Flyers, Posters, and handouts

**Media and Press Tools**
- FIRST Marketing and Press Tools

**Presentation Materials**
- FIRST Tech Challenge PowerPoint Presentation template (available on the Schoology System)
- FIRST promo video
- FIRST Tech Challenge Promo video
- Game Animation video
- Gracious Professionalism Video
- FIRST Scholarship Video
- FIRST Scholarships!
- Youth Protection Program video

Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Appendix J: Sample Inspection and Judging Schedule

The following schedule is set up for a 12-team event with 3 Robot Inspectors, room for 3 teams at a time at field inspection, and 3 Judging Panels. It is recommended that you schedule your rookie teams to go through Inspection first, as they often need to come back for re-Inspection. This schedule gives teams time to get to their next appointment without feeling rushed and provides Judges and Inspectors with an opportunity to gather their thoughts and paperwork before their next appointment.

<table>
<thead>
<tr>
<th>Team #</th>
<th>7:00</th>
<th>7:15</th>
<th>7:30</th>
<th>7:45</th>
<th>8:00</th>
<th>8:15</th>
<th>8:30</th>
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</thead>
<tbody>
<tr>
<td>3081</td>
<td>Field Inspection</td>
<td></td>
<td></td>
<td></td>
<td>Judging</td>
<td></td>
<td>Robot Inspection</td>
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<td>Judging</td>
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<td>Robot Inspection</td>
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<td></td>
<td></td>
<td>Judging</td>
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</tr>
<tr>
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<td>Robot Inspection</td>
<td></td>
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</tr>
<tr>
<td>6411</td>
<td>Judging</td>
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<td></td>
<td>Robot Inspection</td>
<td></td>
<td>Field Inspection</td>
</tr>
<tr>
<td>8311</td>
<td>Judging</td>
<td></td>
<td></td>
<td></td>
<td>Robot Inspection</td>
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</tr>
<tr>
<td>9019</td>
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<td></td>
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<td>Field Inspection</td>
</tr>
<tr>
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</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>10610</td>
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<td>Field Inspection</td>
<td></td>
<td></td>
<td>Judging</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix K: Sign Templates

You are welcome to modify these signs to suit your needs and include Sponsor information as appropriate. These signs are also available full-size as a Word doc on the Schoology system so that you can modify/edit as necessary.
Competition Area

Team
Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Safety Glasses Required

Remember!
If you didn’t see it here, or hear about it here, or read about it here, you may NOT consider it in the deliberations.
FIRST® Tech Challenge
Core Values

We display GRACIOUS PROFESSIONALISM® with everyone we engage with and in everything we do.
We act with integrity.
We have fun.
We are a welcoming community of students, Mentors, and Volunteers.
What we learn is more important than what we win.
We respect each other and celebrate our diversity.
Students and adults work together to find solutions to challenges.
We honor the spirit of friendly competition.
We behave with courtesy and compassion for others at all times.
We act as ambassadors for FIRST® and FIRST® Tech Challenge.
We inspire others to adopt these values.

You are welcome to modify these signs to suit your needs and include sponsor information as appropriate. These signs are also available full-size as a Word doc on the Schoology system so that you can modify/edit as necessary.

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Appendix L: Floor Plan Template

Sample FIRST® Tech Challenge Event Layout - Square Field

- Volunteer Lounge
- Event Admin
- Food Area

Pit Area
- Practice Field
- Robot Inspection
- Field Inspection

Competition Field Area
- Trophy/Awards Table
- Scorekeeper
- Driver's Station
- Audience
- 6' Table
- Game Controller
- Laptop
- Monitor/Screen
- Registration

Team Qualifying Area
- Pit Admin
- Judging Room
- Judging Room
- Power Source
- Printer
- Stanchion
- Table/Chairs

Team Pit Area
- 6' Tables and power source in each pit
- 10' x 10' optimal space, but determined by space restrictions.
Sample FIRST® Tech Challenge Event Layout - Diamond Field

Volunteer Lounge  Event Admin  Food Area

Competition Field Area
- Trophy/Awards Table
- Scorekeeper
- Driver Station
- Main Score
- Team Opening Area
- Audience

Pit Area
- Robot Inspection
- Field Inspection

Key
- 6 Table
- Power Source
- Game Controller
- Printer
- Laptop
- Stanchion
- Monitor/Screen
- Table/Chairs

Team Pit Area
- 6" Tables and power source in each pit.
- 10" x 10" optimal space, but determined by space restrictions.

Gracious Professionalism® - “Doing your best work while treating others with respect and kindness - It’s what makes FIRST, first.”
Appendix M: Recommendations for Static Mitigation

In climates when the relative humidity at normal room temperature is less than 40%, FIRST recommends that Partners follow one of the actions below to reduce static buildup on the robots:

Most Effective – Antistatic Spray
Use a commercial Antistatic spray. These sprays increase the electrical conductivity at the surface of the tile floor and reduce the build-up of electrostatic charge on the robots. We do not recommend Static Guard or other products meant for clothing. We recommend the following Antistatic sprays:

- Most Effective (Highly Recommended): Heavy Duty Staticide
- Effective: General Purpose Staticide

Steps to Apply Staticide:

1. Tape the fields prior to using spray.
2. Spray the field tiles at least 1 hour prior to field use. Please be sure the area is well ventilated.
3. Spray the field tiles until they are damp (but not excessively damp).
4. Allow the field tiles to dry before use.
   a. Note: Antistatic sprays will change the characteristics of the field tiles. It is important to communicate this in advance to teams in your region.
5. An application of spray should last at least an entire competition.
   a. The Heavy Duty Staticide spray can be sprayed less frequently, perhaps one treatment for every few (4 or more) competitions.
   b. The General Purpose Staticide spray can also be sprayed less frequently, however, even when freshly applied, it is not as effective as the Heavy-Duty Spray.

Effective – Water
Water is also extremely effective at mitigating the risk of an electrostatically induced disruption. Water enhances the electrical conductivity of the tile floor and reduces the build-up of charge on robots.

Steps to Apply Water:

1. Add water to a spray bottle.
2. Spray water on field tiles so that the tiles are initially visibly damp, but not over saturated.
   a. Spray only enough so that the water gets absorbed into the tiles a minute after spraying.
   b. There should NOT be puddles of excess water on the field after spraying.
   c. Use a towel or rag to dry any field elements that might become slippery if accidentally sprayed.
3. Reapply water every 20 to 25 minutes.