

District Event Planning Guide – Best Practices

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Introduction

This guide serves as a resource to help newly formed Districts, new District Events that are occurring for the first time, returning events who could use assistance, or areas considering going to Districts, and provides information and resources that are helpful to planning successful events.

While not all Districts are run the same way, [Core Values and Gracious Professionalism](#) are fundamental principles that are at the heart of the *FIRST* Robotics Competition community. Core Values emphasize teamwork, respect, and inclusion, while Gracious Professionalism promotes good sportsmanship, ethical behavior, and respect for others. These principles are critical to consider when organizing *FIRST* Robotics Competition events because they help create a positive and welcoming environment that fosters collaboration, creativity, and innovation. When event organizers prioritize the Core Values, they help ensure that all participants feel respected, and supported, regardless of their background, skill level, or experience. By promoting these principles, *FIRST* Robotics Competition events become not just competitions but also opportunities for personal growth, community building, and learning from one another. Ultimately, embracing Core Values and Gracious Professionalism helps create a culture of excellence, sportsmanship, and mutual respect that benefits everyone involved in *FIRST* Robotics Competition events.

Districts may be set-up and run differently from area to area, based on what works best for your community, but standard event guidelines exist. Any of the existing districts are happy to share ideas and best practices, to ensure success for all our students. To find a District partner, visit the [Find Local Support webpage](#).

Season Overview

The *FIRST* Robotics Competition planning process unfolds continuously throughout the year. Here is a general outline of the yearly planning phases to use as a guide.

Note: District Events work closely with their District Leadership to determine responsibilities and coordinate with *FIRST*, as only a few District representatives have access to *FIRST*'s systems.

Preseason (May - December)

- Review feedback from volunteer and participant surveys
- Secure and Book venues (refer to the [District Event Site Requirements](#) document)
- Renegotiate Memoranda of Understanding documents with venues (as applicable)
- Form, Organize, and Start event planning committee meetings
- Organize venue walk-throughs
- Return any field elements required by *FIRST* by November 1
 - Confirm date each year with *FIRST*
- Complete event drawings and pit maps
- Engage electrical, AV and lighting crews to ensure that the space meets requirements
- Submit IT Requirements to venues
- Book vendor services (EMT, security, A/V, etc.) as required in conjunction with your venues
- Follow the Season Due Dates document from *FIRST* to ensure that key required information is submitted to *FIRST*. This may be done at the District Leadership level. The document/link changes each year but becomes available during the pre-season.
- Work with event Volunteer Coordinator (VC) and District Leadership to ensure Key Volunteer coverage
- Engage VIPs and sponsors to appear at events

- Complete multi-year Memoranda of Understanding agreements with venues (as applicable)

Build Season (January - February)

- Make plans for event catering
- Communicate with teams and volunteers to provide event details (venue map, event schedule, parking, food options, etc.)
- Work with Event Manager to confirm event logistics and safety and emergency preparedness plans
- Venue IT Requirements due to *FIRST* (January 31)
- Complete event T-Shirt designs and produce T-Shirts (if applicable)
- Prepare media assets to show at events
- Have key volunteers build the field prior to the start of events if field is received in time

Competition Season (March – April)

- Start discussions with current venues on returning for the following year
- Follow event checklists to ensure that events unfold as expected

District Leadership can also refer to the PDP Calendar available in SharePoint as a reference document.

Budgets

Budgets vary across district events. Each individual District Event should work with their District Leadership on what they are required to fund themselves and what the District covers. Since district events are fully financed by the District and not *FIRST*, budget discussions and what is allowed is handled locally.

Sample budget line items include venue rental fees, catering, and vendor fees.

Events should plan accordingly and regularly review their budget to ensure they are on target.

Professional event managers may be able to negotiate better rental terms, especially with larger venues such as those used in district championships, and those costs can be accounted for in budget planning.

Event Venues

District Events

Events can refer to the [District Event Site Requirements](#) document to be used when evaluating prospective venues. Venues are needed for at least 3 days, but setup typically begins the day before teams' load-in.

Competition Area

The Competition field requires a space of at least 130' x 80', and with a surrounding seating capacity of about 1,000.

Event Office

The event office should be a closed space where event radios are stored and is used in administering all directions supporting the event and schedule. Can also be used if private conversations between event participants and event leadership are needed.

Judging Rooms

Events should have a Judges' Room and a *FIRST* Impact Award & Dean's List Award Interview Room. Depending on your event schedule (confirm with your event's Judge Advisor), the *FIRST* Impact Award and Dean's List Award interview rooms could be the same room used on different days.

The Judges' Room should encompass 500-750 sq. ft, be able to be rearranged into a U-Shape or other setup for judge deliberations and include seating for 15-30 people.

Pits

Each team pit requires a 110 VAC drop and at least a 6ft table (8ft preferred), secured and provided by the Event. Pits should be 10'x10'x10' unless coordinated in advance with District Leadership and communicated to teams prior to the event. The aisles between pits should be at least 10' wide.

The pit area should have direct loading access and also include dedicated space and table(s) for Pit Admin, Robot Inspection, Spare Parts, and Machine Shop. For each of these areas, an 8ft table is needed, along with room around the table. Robot Inspection will need additional space to account for weighing and measuring robots.

Practice Field Area

A 15' by 30' area is required at a minimum. There should be additional space to allow for lining up and placing a table for volunteers to coordinate the use of a field. Special attention may need to be paid to the presence of walls beside the practice field as some practice elements may need additional stability. If there are projectiles in the game play, thought should be given as to the potential trajectory with respect to pits, spectators and ceiling height.

The Practice Field is set up to allow teams to interact with representative field elements and to test their starting auto game piece. It is not intended to test multi-piece auto modes or full field strategies. *FIRST* provides a recommended layout, but events may need to tweak exact placement depending on the space available in the venue.

Volunteer Lounge

The volunteer lounge should be a reasonable distance from the competition area and have seating for about 70 people. Round tables are recommended, as it allows volunteers to converse and relax amongst themselves during their break.

The volunteer lounge (or another designated area near the competition field) should have drinks and snacks available throughout the event for volunteers.

Concessions/Team Lunch Area

Events should plan to have an area where teams can purchase lunch and identify a suitable seating area. This space will be used throughout the event by teams, not just during typical lunch breaks. This space can also be used as a quieter area

Road Case Storage

Road cases may be stored behind pipe and drape, under bleachers, in change rooms or in back hallways, depending on the venue and egress and safety requirements. Collecting road cases in an area away from the field can greatly enhance the tidiness and overall look and feel of the event.

Ancillary Areas

Depending on your venue space and the needs of your event, additional rooms may be arranged such as the following:

- Prayer Room,
- Quiet Room (see more information in the [Quiet Room Guide](#)),
- Mentor Lounge
- Rooms for Conferences may be needed.

Work with your District Leadership on determining what space is needed, what space you would like to have and plan accordingly.

Electrical Requirements

Some venues may not have all the electrical circuits that are needed to run and power an event, so rental of a generator may be required.

The field requires at least two (2), preferably three (3) 20 amp circuits. These circuits must be independent of the circuits needed for Audio/Video requirements and sound systems.

Pit electric currently varies widely in implementation. Pits should be outfitted with 2 to 4 teams maximum per 20 amp circuit.

IT Requirements

Each event is required to have the venue's IT staff submit venue internet information via an electronic form from *FIRST*, that outlines the IT specifications of the venue to ensure that adequate upload and download speeds will be available during the event and that security protocols will not interfere with connectivity.

FIRST provides Districts with an electronic form that they provide to their venues for the IT team at each venue to complete and send back to *FIRST*.

Floor Covering

Each event will need to check with their venue on what areas of the venue will need to have the floor covered.

Floor covering can include Masonite, gym guard, or other coverings that the venue would consider acceptable.

Insurance

District Leadership/the PDO will typically need to provide Certificates of Insurance (COIs) to each venue location. In addition, vendors should provide COIs to the PDO listing the organization as additionally insured. Most venues will have a requirement for the amount of insurance that is required to rent or occupy the space, and these venue requirements typically range from \$1 million to \$3 million in general liability insurance. Many schools, venues and organizations will have this documented in a facilities use application.

Machine Shop

Some venues may have a machine shop available. Signage may be put in place to direct participants to the machine shop. In other cases, a machine shop may be brought in on a truck and placed strategically as near to the pits as feasible.

Refer to the [Machine Shops Event Planning Guide](#) for additional guidance.

Vendors

Depending on the size of your event, your budget and your available volunteers, you may need to contract some of the following vendors:

- Catering
- Parking attendants
- EMT
- Cleaning service
- Rigging crews
- Forklift operator
- Audio Visual Crew
- DJ
- Internet Provider
- Bleacher provider
- Event manager
- Extra work crews for loading and unloading
- Decorator for floor layouts

Audio/Visual Vendors

A carefully planned audio-visual setup greatly enhances the event experience. There are costs associated with quality audio that need to be considered in light of the overall budget. AV crews should pay close attention to the sound dynamics in the venue and select equipment accordingly ensuring that there is enough power so that the audience may hear while being mindful of the dynamic range as it relates to the structure of the venue.

AV crews should be provided the [Audio Level Expectations document](#) to ensure they follow sound expectations.

Catering and Food Services

A catering vendor (or multiple vendors) should be selected to provide volunteer/staff catering throughout the event. Typical volunteer meals include:

Breakfast: Day 1 and Day 2

Lunch: Day 0, Day 1 and Day 2

Dinner: Day -1, Day 0

Snacks and drinks should be available and provided throughout the event to volunteers. It is recommended to keep water and drinks by the playing field for ease of access to field volunteers who can't easily leave the field.

Caterers should be provided with any dietary restrictions for volunteers in advance. Consult your VC on any dietary restrictions that volunteers may have.

Tip: Buy drinks and snacks for volunteers from Wholesale Clubs (e.g. BJ's, Costco, Sams Club) to save on costs (as allowed).

Below is a sample catering numbers chart based on an event with 30 judges. Numbers are lower at the start and end of the event during load in and load out. Judges are listed separately since they will likely take their meals in the judging room, but this varies by event. Some events may have the Judges grab their food from the volunteer room and then go to the judges room.

Day	Time	Meal	Who?	Food Count
Thursday March 14	19:30	Dinner	General	5
Friday March 15	08:00	Breakfast	General	14
Friday March 15	12:30	Lunch	General	44
Friday March 15	18:00	Dinner	General	44
Saturday March 16	07:00	Breakfast	General	55
Saturday March 16	07:00	Breakfast	Judges	30
Saturday March 16	10:00	Snack	Judges	30
Saturday March 16	13:30	Lunch	General	55
Saturday March 16	13:30	Lunch	Judges	30
Saturday March 16	15:00	Snack	Judges	30
Saturday March 16	18:00	Dinner	General	55
Sunday March 17	07:00	Breakfast	General	56
Sunday March 17	07:00	Breakfast	Judges	30
Sunday March 17	10:00	Snack	Judges	30
Sunday March 17	13:30	Lunch	General	56
Sunday March 17	13:30	Lunch	Judges	30
Sunday March 17	15:00	Snack	Judges	30
Sunday March 17	20:00	Dinner	General	15

Medical Services

Events are required to have some form of Certified Medical Personnel service on-site (an ambulance is not required). This can typically include a table set-up in the pit area, near the competition field, or in a hallway in between the pits and competition field. Medical personnel should be dedicated to this role and not filling other key event roles.

Medical services should plan to be on-site whenever teams are present (e.g. 4pm-10pm on Friday, and 8am-6pm on Saturday and Sunday).

Communications

A communication plan leading up to the event may be handy and may include the following:

- Message from the venue faculty / staff / representatives / VIPs
- Food options and schedule at the venue
- Load in map
- Event map
- Parking map and information
- Event public schedule
- Safety reminders
 - Regulations for electronics in the pit
 - Necessity for each participant to have safety glasses
- Availability of event T-Shirts and sample images of t-shirts
- Load in time slots (optional depending on the venue)\
- Advertisements from sponsors or post-secondary hosts
- Procedures for team media representatives to take photos during the event
- Special activities to take place during the event such as:
 - Pizza reception
 - Social gathering
 - Engineering challenge organized by host venue

Event Signage

Strategically placed signs will make the event run more smoothly. A sample signage checklist is as follows:

- Practice field
- Safety Glasses Station
- EMT
- To Pits
- To Field
- Optional Pit map
- Load-in
- Parking
- Printable Arrows to fix to walls and posts
- Pit Admin
- Machine Shop
- Queueing
- Quiet Room
- Swag Booth
- Inspection
- Several “No Entry” signs may be handy
- Volunteer Lounge
- *FIRST* Impact Award Interview Room
- Dean’s List Award Interview Room
- Judges’ Room

Events should check with their District Leadership on what signage they need to provide locally and what will be coming from the District.

Consumables

District Events are responsible for purchasing and obtaining the Field Consumables that are needed for the *FIRST* Robotics Competition field for each event. This typically includes tape and zip ties. The required amounts and sizes per event are provided by *FIRST* to District Leadership by January of that competition year.

Field Transportation

District Events are responsible for coordinating field shipments to each of their events. District Leadership typically manages this, as *FIRST* will send one (1) shipment to a designated District address, with subsequent transportation to the respective District Events at the responsibility of the District.

An FTA should be present when unloading fields and reloading fields to ensure that they are correctly and safely packed into the trucks

Event Planning Checklist

Use this [District Event Workbook Template spreadsheet](#) (file downloads automatically) as a checklist to ensure that your event is thoroughly planned beforehand and unfolds as expected. Events can customize the spreadsheet to fit their needs.

Sponsors

Individual district events will work closely with their District Leadership on event sponsors, as how event sponsors are handled can vary across districts. Sponsors are needed for the event, as the cost of running the event falls solely on the District.

Volunteers & Staffing the Event

Running a *FIRST* Robotics Competition District Event takes a similar number of volunteers to a regional event, however there may be some differences based on your area. In addition, Districts have Senior Volunteer roles that liaise with Key Volunteers, *FIRST* and District Leadership. Senior Volunteer roles include:

- Senior *FIRST* Technical Advisor
- Senior Judge Advisor
- Senior Lead Robot Inspector
- Senior Volunteer Coordinator

Senior Volunteer role descriptions can be found on the [FIRST SharePoint](#) site for PDPs to reference.

Refer to the *FIRST* Robotics Competition Event Planning Guides: [Staffing the Event Guide](#) and information on [Judges](#) on the *FIRST* website for additional information.

District Events will work closely with their Senior Volunteers and District Leadership in planning and running their events.

Strategies from the Field

FIRST Robotics Canada (Ontario District)

FIRST Robotics Canada maintains a warehouse at the headquarters of Studica, one of our sponsors in Mississauga, Ontario. We keep an inventory of materials that help us run events across the Province:

- 4'x4'x1/8" particle board sheets to place under the field. These are arranged in 16 columns and 8 rows, aligned such that the edge is under the edge of the carpet on the audience side. The particle board sheets ensure that we do not damage gym floors
- Pipe and drape carts - 3' and 8' pipe and drape
- A road case for directional signs
- A road case for banners
- A road case for sign tripods
- Parking lot signs
- A 10'x10' display booth to showcase *FIRST* LEGO® League, *FIRST* Tech Challenge, *FIRST* Robotics Competition and other government-sponsored programs such as CanCode, a national coding initiative and SDF - a Skills Development Program.
- TV monitors for viewing in the pits
- Portable machine shop
 - Bandsaw
 - Drill press
 - Mill
- Personal Protective Equipment for use when overhead rigging is involved (usually at the Provincial Championship):
 - Steel toe add-ons for shoes
 - Hard hats

The above items are transported to events along with a field in 53' trucks. We schedule two truck routes, red and blue, to cover our ten events over the six weeks of competition.

Our events are largely run in College or University gymnasiums. Occasionally we use available hockey rinks. High school gyms generally are not sufficiently large to host a *FIRST* Robotics Competition event comfortably in Ontario. Our Provincial Championship was held in a convention center for the first time in 2024.

For questions regarding Ontario District Event Operations, please contact:

william.neal@firstroboticscanada.org

FIRST Mid-Atlantic (FMA)

FMA utilizes high schools to host their District Events. By utilizing high schools that are home to a *FIRST* Robotics Competition team, this lowers (and in most cases eliminates) any rental fees and provides the host team with fundraising opportunities through running and managing the event concessions. In addition, in most cases it allows for a machine shop to already be present on site and is a great opportunity for the host team's alumni or mentors to run the machine shop and volunteer.

FMA works to run each District Event on an approximately \$25,000 budget. Costs for the events include DJ, Security, Custodial, Waste Removal and Volunteer Food. DJ Services are contracted at the District level.

FMA provides Masonite to each host venue the first year that they host an event, with the expectation that the venue stores the Masonite throughout the year. If replacement Masonite is needed in subsequent years, FMA provides replacements. Some events do not use Masonite, as their school has gym guard or floor covering that the school owns and maintains. In those cases, FMA only provides the Masonite that would go under the field carpet. Each allotment of Masonite, for both the competition gym and the pit location is budgeted as an additional \$10,000 per venue.

FMA provides two options to event hosts for pit power. FMA contracts generator rental for the temporary pit power or will reimburse the school/venue for installing 4 50-amp electrical circuits. FMA has invested in a pit power distribution system for each of our two fields, with either a 200-amp primary distribution from a generator, or a direct interface to the 4 50-amp electrical circuits.

In addition to the Senior Volunteer Roles listed in the Volunteers section, FMA also has a Senior Head Referee (HR). This role coordinates the HR schedule and liaises with *FIRST*.

FMA (along with NE *FIRST*) utilizes PODS to transport the field and district equipment from event to event. Each field utilizes about 5 PODS to transport all of the equipment between events, which equates to needing between 7-10 parking spaces at each venue. PODS are dropped off the Tuesday or Wednesday before the event and picked up the Monday following the event. The POD delivery schedule is managed at the District level, rather than at the District Event level.

For questions regarding FMA District Event Operations, please contact info@midatlanticrobotics.org.