



THE GARDEN STATE  
**RUMBLE**  
FIRST TECH CHALLENGE

# **NEW JERSEY FTC Championship Tournament Team Information Packet**

*Sunday, February 28, 2016  
at New Jersey Institute of Technology*

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# Introduction

Welcome and thank you for volunteering to be a part of the Garden State Rumble *FIRST* Tech Challenge! We are truly fortunate to have such a committed group of volunteers who share in the *FIRST* mission to inspire the next generation to celebrate science and technology. Thank you for your time. We hope that you will have a rewarding and thoroughly enjoyable experience.

## What is *FIRST*?

*FIRST* (For Inspiration and Recognition of Science and Technology) was founded by inventor Dean Kamen to inspire young people's interest and participation in science and technology. Based in Manchester, N.H., the 501 (c) 3 not-for-profit organization designs accessible, innovative programs to build self-confidence, knowledge, and life skills while motivating young people to pursue opportunities in science, technology, engineering, and math.

*FIRST* provides the *FIRST* Robotics Competition for high-school students and the *FIRST* LEGO League (FLL) for 9 to 14 year-olds. *FIRST* also offers the Junior *FIRST* LEGO League (JrFLL) for 6 to 9 year-olds and the *FIRST* Tech Challenge (FTC), a mid-level robotics competition that offers students (from 7<sup>th</sup> – 12<sup>th</sup> grades) a more affordable and accessible opportunity to participate in *FIRST*. For more information, visit the *FIRST* website at [www.usfirst.org](http://www.usfirst.org).

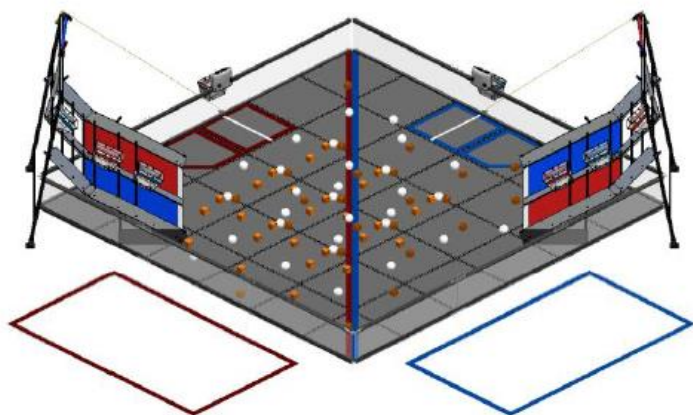
## What is the Garden State Rumble *FIRST* Tech Challenge?

The Rumble is the official FTC Championship Tournament for the New Jersey. This year, there will be NINE teams advancing from the NJ FTC Championship to the next level of Championship Competition. Nine teams will move on to compete at the FTC Eastern Super Regional Championship on March 18<sup>th</sup> – 20<sup>th</sup> at the University of Scranton, PA. Then, ~25 of the teams competing at that 72-Team tournament will earn their way to the FTC World Championships at Union Station in St Louis. (April 27<sup>nd</sup> – 30<sup>th</sup>).

## What makes the Rumble Special?

The Garden State Rumble is one of the largest Championship Events in the country. The event is designed to hold 48 teams – making the 2 Division event very exciting. This event, and all *FIRST* competitions, are free to spectators and open to the public. Bring friends!

# This Year's Game



## The Game:

**FIRST® RES-Q<sup>SM</sup>** is played on a 12 ft. x 12 ft. square field with approximately 1 ft. high walls and a soft foam mat floor. Mountains consisting of alliance-specific climbing areas and goals are located in two corners of the playing field. Alliance-designated Zip Lines extend from the top of the Mountains to the playing field wall. Two alliance-specific Rescue Beacons in need of "repair" by autonomous robots are located on the playing field perimeter wall.

Scoring elements are 14 Climber figurines and 80 Debris in the shape of blocks and spheres. At the start of a match, Debris are randomly located throughout the playing field floor. Each team starts with up to two Climbers that can be pre-loaded onto their robot.

Two randomly selected teams are paired together as an alliance to play one match against a second alliance. Alliances are designated as either "red," or "blue."

Matches have two distinct periods of play: a 30-second Autonomous period followed by a two minute Driver-Controlled period which includes a 30 second End Game.

## Autonomous Period:

The game starts with a 30-second Autonomous period where robots are operated via pre-programmed instructions only. Robots gain points by: "resetting" Rescue Beacons, delivering Climbers to a Shelter, parking on the Mountain, and parking in the Rescue Beacon Repair Zone or Floor Goal.

## Driver-Controlled Period:

During the Driver-Controlled period, teams retrieve up to five Debris at a time from the playing field and place them in Mountain Goals or Floor Goals. Debris may not be de-scored from the Mountain Goals but may be de-scored from the Floor Goals. Robots also scale the Mountains to release Climbers that slide down a Zip Line to safety.

## End Game:

The final 30-seconds of the Driver-Controlled period is called the End Game. In addition to the Driver-Controlled period tasks, robots earn bonus points in the End Game by hanging from the Pull-up Bar on the topmost vertical section of the Mountain and claiming an All Clear Signal for their alliance.

## Autonomous Period Scoring:

Robot Parked in a Rescue Beacon Repair Zone	5 points
Robot Parked in a Floor Goal	5 points
Robot on the Mountain and Touching the Floor	5 points
Robot Parked on the Mountain Low Zone	10 points
Robot Parked on the Mountain Mid Zone	20 points
Robot Parked on the Mountain High Zone	40 points
Rescue Beacon Illuminated for an Alliance	20 points per side
Climber in a Shelter	10 points per Climber

## Driver-Controlled Period Scoring:

Debris Scored in a Floor Goal	1 point each
Debris Scored in a Mountain Low Zone Goal	5 points each
Debris Scored in a Mountain Mid Zone Goal	10 points each
Debris Scored in a Mountain High Zone Goal	15 points each
Robot on the Mountain and Touching the Floor	5 points
Robot Parked on the Mountain Low Zone	10 points
Robot Parked on the Mountain Mid Zone	20 points
Robot Parked on the Mountain High Zone	40 points
Climber Released/Slid Down the Zip Line	20 points each
Climber in a Shelter	10 points per Climber

## End Game Scoring:

Robot Completely Supported by the Pull-up Bar	80 points
Claim an All Clear Signal	20 points per Signal



**FTC**

FIRST® Tech Challenge

# What to Bring, Check-In, Etc.

## WHAT TO BRING

- There are a few critical items to verify prior to the 28<sup>th</sup>. Complete this extra effort to make tournament day flow more easily for all.
  1. **Competition Template:** Make sure you are using the most current software for your Android.
  2. **Android Mounting:** Make sure that your Android is mounted per the guidance given by FIRST. The USB cabling should be dressed nicely so that interfaces are straight-line and non-stressed. Be sure that connections are VERY secure.
  3. **Self-Inspection:** In order to expedite robot inspection, teams are asked to review their robot for compliance to FTC requirements before coming to the event. The person who performs this task should accompany the robot to Inspection. Designating someone to take responsibility for success in inspection encourages the correction of problems before game day. It can really speed along the inspection operations on site.
  4. **Consent Forms:** The STIMS Team Roster Summary print-out from the on-line Consent Form system is needed. Proper use of STIMS will move your team through Check-In so much faster!
- **What Else to Bring:** As always, please bring safety glasses and a multi-outlet extension cord for team use. Along with your charger and spare batteries, it is smart to bring a few other spare parts such as motors and motor controllers. It is also smart to mark your battery packs and other items which could conceivably get mixed with those of another team.

## TEAM CHECK-IN

- The majority of the team should report immediately to their table in the Pit Area. Pit Tables are marked with Team Numbers. Posted at Pit Admin will be a map and info about which Division you are in.
- Only Coach/Mentor and 1-2 team members should check-in at Pit Administration to ...
  1. Turn in STIMS list
  2. Do Not turn in your Engineering Notebook at Check In. This year, your team simply carries it into the Interview with them.
  3. Verify your assigned JUDGED INTERVIEW TIME. Interviews will begin at 8:20 and will finish prior to Opening Ceremonies. Many lanes of inspection will be open. Take your robot to Inspection BUT remember your Judged Interview appointment takes priority over Inspection. Don't miss your Interview Appointment.
  4. Only teams that pass inspection are allowed to access the Practice Fields.
  5. Pick up any information updates and schedule changes
  6. Pick Up Drivers Buttons and Coaches buttons. They will be given to teams during Registration. NO team members should be in the Competition Area unless they are wearing one of these Drive Team buttons.

## FOOD

- NJIT has many lunch options for teams & guests. They have a huge selection! Their Continuous Dining Area is Walk-In and has over 20 Food Stations. Many, many choices!

## ALLIANCE SELECTION and ADVANCEMENT:

- Following the completion of Qualification Matches, each Division will form four 3-Team Alliances. This means the 12 teams (25% of the teams) will participate in the Elimination Matches. It is up to the Alliance Captain to assure that each alliance team plays in at least one of the best-of-three matches.
- The Division Elimination Matches will yield a "Division Winning Alliance" for Parkway and one for Turnpike. Those two Division Winning Alliances will meet head-to-head in the NJ FTC Championship Finals to determine the Winning Alliance of the event.
- FIRST has advised New Jersey that NINE teams will advance to the Eastern Super Regional Championship (Scranton, PA) from our event. The order of advancement will be per FIRST guidelines ...INSPIRE, WA Captain, ... We will continue down the order should any double-qualification occur (i.e., INSPIRE Runner Up, WA 1<sup>st</sup> Pick, ...) until NINE advancing teams are identified.

## SPECTATORS

- Please keep the area directly in front of the bleachers clear so that the view of others is not obstructed.
- There will be an area of special seating that is reserved for a few visiting VIP's. Please respect this area and its marking.

## SOUND & VIDEO

- As always, we thank Vic and the NJIT Students for their great job with the live video display and sound system.
- Once again, Rich Morgan and of [RMX DJ Entertainment](#) has volunteered his time to DJ the Music. Thanks, Rich!

## Emergency Contact Information:

- In case of emergency, Vince's cell phone number is 862-432-1526.

# Inspection, Field Appointments, Queuing

## GENERAL

- We have a very full day. In order to begin the competition on time, teams will be scheduled for Inspection when they arrive.
- Each team has been allotted ~5 minutes for the Hardware Inspection Check and ~5 minutes for the Software Verification. Please come prepared. (That means a pre-inspected and compliant robot.)
- Send only 2-3 members to Inspection with your robot. Let's avoid a pile up.
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## PRE-INSPECTION

- Inspection Areas will have HELP persons assigned to help answer any questions. You should come early if you have a problem or question. Help is available.

## FIELD (SFW) INSPECTION

- In addition to Judged Interview Times, **Field Inspection Appointment** times have been established.

FIELD INSPECTION APPOINTMENTS - Come Early if NO Line				Remember Judging is #1	
9:20	9:40	10:00	8:20	8:40	9:00
247	4215	6037	7149	8812	9971
248	4347	6069	7350	9042	9999
365	4486	6081	7414	9554	10159
755	4856	6337	7488	9848	10243
2753	5169	6613	8391	9889	10343
3415	5339	6936	8405	9891	10669
3944	5398	7026	8522	9921	10785
4102	5996	7040	8574	9927	10919

- Note – Judged Interview Appointment takes precedence over all else on Sunday morning, ...with making your Field Inspection time (i.e., Software Inspection time) a close second.
- These two appointments are scheduled to be non-conflicting. You should REALLY be on time for both ... in order for your day/our event da to go smoothly.

## ROBOT (HDW) INSPECTION

- Manage your time. We are expecting teams to work in Robot Inspection around their Judged Interview and Field Inspection times.
- It is a good practice to accomplish your Inspections as soon as possible. This is always THE pacing element in getting the competition started on time. Please help.
- It is our intent to have multiple lanes of Inspection.
- Remember to have your team numbers on the robot in large size, per specification. So too, make sure that your robot accommodates the mounting of the Alliance Flag.

## COMPLETING INSPECTION – Stickers and Forms:

- Hardware Inspection – The Inspector will affix a Hardware Inspection PASS sticker when mechanical inspection is successfully passed. The passing form will be kept by Inspection ...and picked up by Pit Admin. If a robot fails inspection, the form can stay with the robot and teams so that the correction be made. The form is then resubmitted with the robot when ready for re-inspection.
- Software Inspection – The flow is similar to the description above EXCEPT that the team holds onto the Software Inspection form. The team presents their robot and Inspection Form to the Field Personnel when they report there for Inspection (Field Demo). After a successful Field Demo, the Field Personnel will hold onto the form and will affix a Software Inspection PASS sticker to the robot.
- Robots can only compete if they have both Hardware and Software PASS stickers attached.

## QUEUING

- During the day, queuing is vital. Since the schedule is tight, teams need to know that we will not hold up matches. Be ready on time.
- It is the teams' responsibility to not miss their match. The volunteers who perform Team Queuing will help but teams must watch the schedule and be ready. Responsibility to not miss a match is the team's. It is recommended someone is assigned to watch.

## SAFETY:

- Safety Glasses are mandatory at the Championship Tournament. All team members and their guests are expected to behave in a safe manner and obey all safety rules. Individuals not acting safely will be asked to leave the event premises. Please notify an Event Crew member if you have any safety issues or concerns. Please report any illness or injuries to the Pit Administration table or event organizers.



# February 28<sup>th</sup>, 2016 - Competition Schedule

7:00	Arrival Time for Volunteers
7:30	Early Bird Arrival - Teams Arrive and go to Registration / Inspection
8:00	Doors Officially Open - Teams Arrive and go to Registration / Inspection
8:15	Practice Fields Available for Teams Passing Inspection
8:25	Welcome - Early Day Announcements
8:45	Registration Closes
9:15	Final Team List to the Scoring Table. Qualifying Matches Set Priority Inspection for critical teams taking place during Opening Ceremonies
10:15	Drivers Team Meeting (including Coaches) on the Fields Teams for Match #1 and #2 are queued into Field Positions Teams for Match #3, #4 are in Field Queues
10:20	All those involved in Opening Ceremonies are in place
10:30	Opening Ceremonies begin Speakers - NJIT, FIRST, PSE&G
11:00	Start of Qualifying Matches 48 Teams in Tournament = 24 Teams per Division (24 Teams x 5 Matches / 4 Teams per Round) = 30 Rounds 30 Rounds @ 6 Minute Cycle Time = 180 Minutes = 3 Hrs First 15 Rounds Complete in ~ 1.5 Hours

- *The 30-Minute Lunch begins at ~12:30. We'll break for lunch a bit early if the Matches are ahead of schedule.*
- *Lunches will be staggered a bit, if possible, to minimize long lines. The Division further ahead will go to lunch first.*
- *PTC Challenge Participants may schedule their modeling time during Lunch, if they are also members of Drive Teams.*

12:30	Break for Lunch NOTE - Matches may continue during lunch, if needed, to stay on Schedule
1:00	MC and Game Announcer call teams for restart of Game Teams for first Matches after Lunch are Standing By
1:15	End of Lunch
1:15	Qualification Matches Resume Final 15 Rounds Complete in ~ 1.5 Hours
2:45	Qualification Matches Complete - Ranking Available
3:00	Alliance Selection Selection of Two 3-Team Alliances per Division
3:15	Semi-Final Elimination Rounds Begin Match #1 = 2nd Seed vs 3rd Seed Match #2 = 1st Seed vs 4th Seed 6 Games x 8 minutes = 48 minutes)
4:00	Division Finals Round Begin (1 Game, 3 Rounds Max, 24 Minutes)
4:30	Championship Finals Round Begin (1 Game, 3 Rounds Max, 24 Minutes)
5:00	Closing Ceremonies Commence Competition Awards and Judged Awards PTC Challenge Awards
5:45	Planned End of Event

THE GARDEN STATE  
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# February 28<sup>th</sup> 2016 - Judges Schedule

7:00		Arrival Time for Volunteers
7:30		Early Bird Arrival - Teams Arrive and go to Registration / Inspection
7:45		Orientation Meeting for Judges
8:00		Doors Officially Open. All Judges on-site
8:20	Begin Interviews	Interview 1 (for Judge Panels a - h)
8:40		Interview 2 (for Judge Panels a - h)
9:00		Interview 3 (for Judge Panels a - h)
9:20		Interview 4 (for Judge Panels a - h)
9:40		Interview 5 (for Judge Panels a - h)
10:00		Interview 6 (for Judge Panels a - h)
10:20		Interviews completed - Judges head for Opening Ceremonies
10:30		Opening Ceremonies Speakers - NJIT, FIRST, PSE&G
11:00	Contingency	Oppty to Interview any team missed
11:20		Each Panel of Judges identifies their top candidates for each Award Engineering Notebooks are available for continuing Judge Review
11:50		Most Judges can observe pre-Lunch Qualifying Matches
12:30		Break for Lunch
1:00		Judges have Opportunity to visit Pits and watch Matches (60 minutes)
2:00		Judges deliberate to reach initial consensus on each Judged Award Input from Pit & Arena Judges incorporated
2:45		Opportunity to visit Pits and watch Matches Pit & Arena Judges witnessing Elimination Rounds Opportunity to witness any controversial award nominees
3:30		Meeting to form Final Consensus on Awards  Input from Pit & Arena Judges incorporated
4:15		Begin Writing Scripts
5:00		Closing Ceremonies Commence Competition Awards and Judged Awards
5:45		Planned End of Event



**February 28th, 2016**



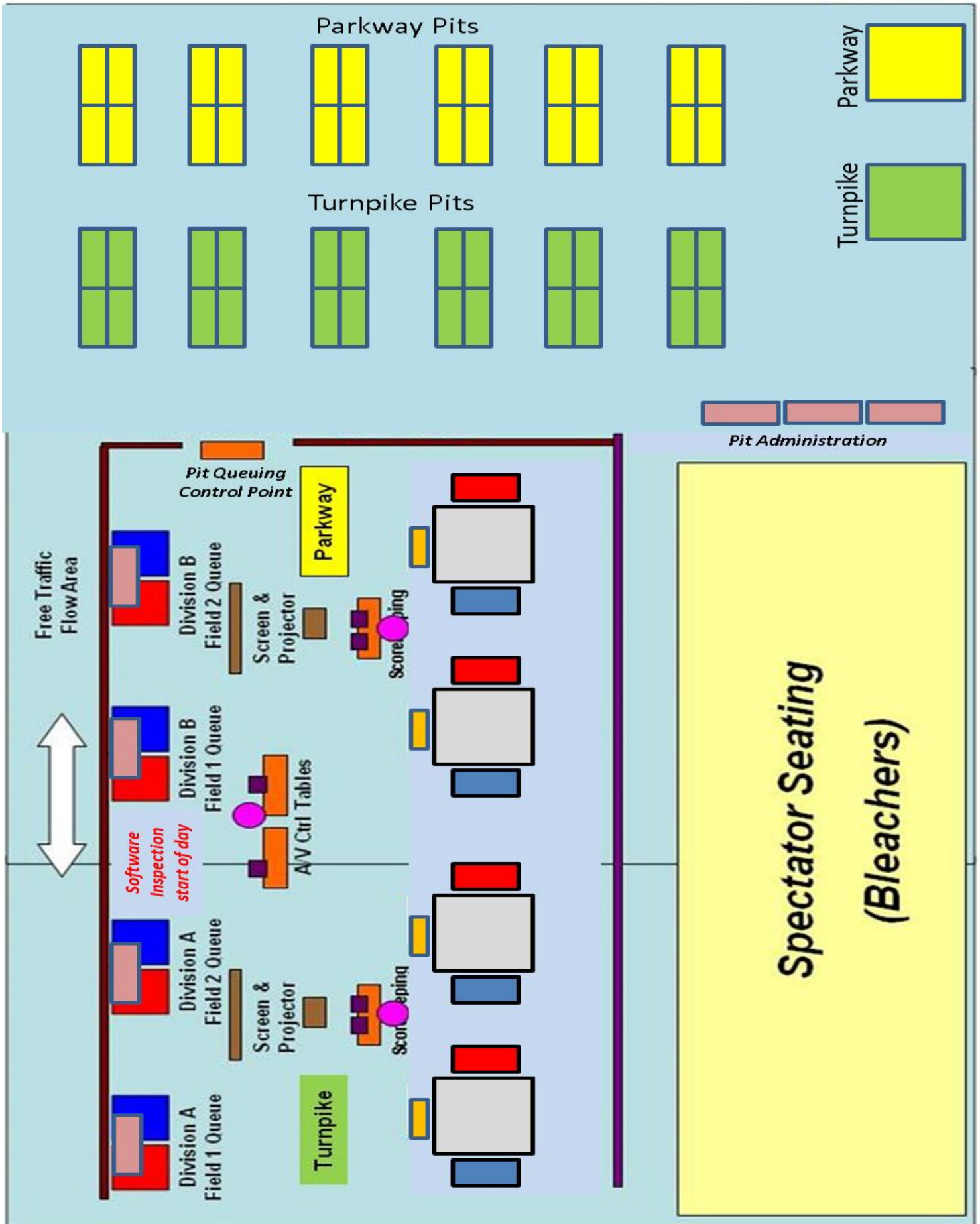
## **Judge Interview Appointments**

1. The Judged Interviews take place in Kupfrian Hall (where the NJ FTC August Workshops are held) at the times noted below.
2. When leaving the Athletic Center for your interview, **be sure to check in with the Lead Judge Queuer stationed near the door of the gymnasium.** That way, we can alert the people in Kupfrian Hall that you are on your way.
3. You should be making your way to the Interview **TEN MINUTES** prior to your Interview appointment time, at a minimum. It will take 3-4 minutes to walk to Kupfrian Hall plus Check In time. Don't be late.
4. Bring your Engineering Notebook with you to the Interview.
5. Teams have the option of bringing their robot with them to the Judged Interview.
6. Don't forget it or your coats when starting on your way.

Appointment Time	8:20	8:40	9:00	9:20	9:40	10:00
Judging Room #1	247	4215	6037	7149	8812	9971
Judging Room #2	248	4347	6069	7350	9042	9999
Judging Room #3	365	4486	6081	7414	9554	10159
Judging Room #4	755	4856	6337	7488	9848	10243
Judging Room #5	2753	5169	6613	8391	9889	10343
Judging Room #6	3415	5339	6936	8405	9891	10669
Judging Room #7	3944	5398	7026	8522	9921	10785
Judging Room #8	4102	5996	7040	8574	9927	10919



# Tournament Layout



# Competing Teams – February 28<sup>th</sup>, 2016

247	Reboot	Parkway	Robo-CATastrophe	WA Captain
248	Fatal Error	Turnpike	Robo Joust	WA Pick 1
365	MOE	Parkway	Fall Harvest	INSPIRE Winner
755	Mechanical Wave	Turnpike	Fall Harvest	WA Captain
2753	Team Overdrive	Parkway	SoNJ Meet Championship	Winning Alliance Partner #1
3415	LHS Lancers	Turnpike	Robo-CATastrophe	Inspire #2
3944	Team Mercury	Parkway	Frozen Frenzy	WA Captain
4102	CHS Cougars	Turnpike	NoNJ Meet Championship	Winning Alliance Partner #1
4215	Hypnotic Robotics	Parkway	NoNJ Meet Championship	Inspire 2nd Runner Up
4347	NanoGurus	Turnpike	Robo-CATastrophe	Inspire #3
4486	Mad Science	Parkway	Robo Joust	FA Captain
4856	Minnie MASH	Turnpike	Fall Harvest	WA Pick 2
5169	Watt's Up?	Parkway	SnowDay Showdown	INSPIRE Winner
5339	WALKERS	Turnpike	NoNJ Meet Championship	Inspire
5398	RoboTux	Parkway	SoNJ Meet Championship	Inspire 2nd Runner Up
5996	Hyper Nike	Turnpike	Frozen Frenzy	Inspire #2
6037	WAGS	Parkway	Frozen Frenzy	INSPIRE Winner
6069	Pingry	Turnpike	Frozen Frenzy	WA Pick 1
6081	I2Robotics	Parkway	Robo-CATastrophe	INSPIRE Winner
6337	Metal Marauders	Turnpike	Liberty Science Center	INSPIRE Winner
6613	Yaliens	Parkway	Fall Harvest	Highest Ranked - Not Adv'd
6936	CodeRunners	Turnpike	NoNJ Meet Championship	Inspire 1st Runner Up
7026	Jdroids	Parkway	Robo Joust	INSPIRE Winner
7040	CyberFalcons	Turnpike	SoNJ Meet Championship	Winning Alliance Partner #2
7149	PAL Enforcers	Parkway	SnowDay Showdown	Inspire #2
7350	Watt's NXT	Turnpike	Robo Joust	Inspire #3
7414	Deceptibots	Parkway	SnowDay Showdown	Connect
7488	Techno-saurus	Turnpike	Robo-CATastrophe	FA Captain
8391	W-Prime Robotics	Parkway	Robo-CATastrophe	WA Pick 1
8405	Milburn Robotics	Turnpike	Robo Joust	Inspire #2
8522	LocoMotors	Parkway	SnowDay Showdown	WA Pick 2
8574	WeByte	Turnpike	SnowDay Showdown	WA Captain
8812	CyberRaptors	Parkway	Liberty Science Center	Inspire #3
9042	Midnight Magic	Turnpike	SoNJ Meet Championship	Inspire
9554	HCST-9554	Parkway	SoNJ Meet Championship	Inspire 1st Runner Up
9848	Mechanical Pioneers	Turnpike	Liberty Science Center	Inspire #2
9889	Cruise Control	Parkway	Liberty Science Center	WA Captain
9891	Team Titanium	Turnpike	NoNJ Meet Championship	Winning Alliance Partner #2
9921	Patriots	Parkway	Fall Harvest	INSPIRE Winner
9927	MidKnight Magic II	Turnpike	Robo-CATastrophe	Connect
9971	LANbros	Parkway	SoNJ Meet Championship	Winning Alliance Captain
9999	Ninejas	Turnpike	NoNJ Meet Championship	Winning Alliance Captain
10159	Lionheart	Parkway	Robo Joust	WA Captain
10243	Robotic Rams	Turnpike	Robo Joust	WA Pick 2
10343	WR Positive Charge	Parkway	SnowDay Showdown	Inspire #3
10669	McNair HS	Turnpike	Liberty Science Center	WA Pick 2
10785	Highlanders	Parkway	SnowDay Showdown	FA Captain
10919	Fawkes Robotics	Turnpike	Frozen Frenzy	Inspire #3

February 28<sup>th</sup> 2016

## PTC / NJ FTC On-Site Modeling Challenge

For 2016, NJ FTC is reprising their on-site modeling Challenge (originally based on the student design competition offered at the FIRST Championship in St Louis in the past). The Challenge consists of three main components: Design Concept, CAD Execution Plan and a Model. The first two can be done prior to the event, but the model must be created live at the NJ FTC Championship on February 28<sup>th</sup>.

Step 1: Register to enter the Challenge at [vincent.frascella@baesystems.com](mailto:vincent.frascella@baesystems.com).

Step 2: Pick a Design Challenge Scenario and brainstorm with your team. Come up with a design and prepare some documentation that can be used to present the concept and the plan for designing it. Then... practice, practice, practice on a part of it or the whole package or whatever you think would be best. You can build parts from scratch or use the kit of parts from FTC competitions.

Step 3: Stop by Pit Admin at the state championship and hand in your Design Concept and CAD Execution Plan. You will be assigned a 20 minute design session for the “live” modeling challenge.

### Design Concept

You can use a paper sketch, CAD model, drawings, or whatever will best convey your ideas. Bring your documentation to the NJ FTC State Championship; they must be turned in at Pit Admin when you sign up for a design session. Your concept will be judged on its novelty and overall potential.

### CAD Execution Plan

This is a written plan and sketch of how you will create the detailed CAD model in Creo. Your plan will be evaluated on plan thoroughness and effectiveness.

### Model

You will be given a 20 minute session at the state championship to show your PTC skills by modeling some part of your proposed robot. It can be the overall package or one part of it. Your model will be judged on its technical merit and completeness.

**Scenario 1: “Crow’s Nest Duty”** – This robotic crew member needs to quickly shimmy up a the ship’s white, 30-foot, 5-inch diameter pole to the Crow’s Nest. There actually is no crow’s nest per se, only a 3-inch “stop-stripe” around the top of the pole. It would be helpful for your shimmying look-out to take note of the stop-stripe before flying overboard. Once at the top of the pole, extra points are given for a robot that can revolve around it to look for any sign of danger, on the ship’s full horizon.

**Scenario 2: “Swab the Deck”** – Being on its first voyage, this new crew member is assigned deck-cleaning duty. Of course being a robot, it need not use a bucket and mop. Instead it shoots a stream of water onto the deck surface, then shoots a stream of soap, then happily dances around the deck to the “Pirate’s Waltz”. Extra points for “crew-member avoidance system” (anti-showering system) lest the new crew member makes enemies early in the voyage.

**Scenario 3: “Walk the Plank”** – Uh, oh ...your robot captive is being made to walk the plank (OK, they can roll across the plank) and into the drink. A cheer goes up from the pirate crew as your robot drops off the end of the plank and out of view. Little does the crew know that it has actually swung around the underside of the plank and, though out of sight, is making its way back toward the ship to cause more mischief. Extra points if the robot includes hidden armament which detonates when coming in contact with the ship’s outer hull.

# Venue Information

# Driving Directions to NJIT

Using GPS? A good search address is [NJIT, 154 Summit Street, Newark, NJ 07102](#)

**Garden State Parkway (GSP):** Take exit 145 to Route 280 East, then follow Route 280 East directions.

**New Jersey Turnpike:** Take exit 15W to Route 280 West, then follow Route 280 West directions.

**Route 280 West:** After drawbridge, take Exit 14B (Broad Street/MLK Blvd.). At bottom of exit ramp, make a left. Go one block to stop sign. Make a left on MLK Blvd. Go five lights to Warren Street. Make a right on Warren Street. Go two blocks to Colden Street. Make a left on Colden Street.

**Route 280 East:** Take Exit 13 (First Street/Newark). At light, make a right on First Street. Go three lights to W. Market Street. Make the soft left on W. Market Street. Go four lights to MLK Blvd. Make a left on MLK Blvd. Go one light to Warren Street. Make a left on Warren Street. Go two blocks to Colden Street. Make a left on Colden Street.

**Route 1 & 9 North & South:** Take exit marked Newark, Route 21 (McCarter Highway). Get in the right lane on the bridge and take the Broad St. exit. Go about 1 mile. Make a left on Court Street. Make a right at third light on MLK Blvd. Make a left at fifth light on Warren Street. Go two blocks to Colden Street. Make a left on Colden Street.

**Route 78:** Take Route 78 to the Garden State Parkway. Follow GSP directions.

**Route 22:** Take Route 22 to Route 21 North. Follow directions for Route 21 North.

**Route 21 North:** Get in the right lane on the bridge and take the Broad St. exit. Go about 1 mile. Make a left on Court Street. Make a right at third light on MLK Blvd. Make a left at fifth light on Warren Street. Go two blocks to Colden Street. Make a left on Colden Street.

**Route 21 South:** From 21 South, turn right on Bridge Street shortly after passing beneath Route 280 overpass. Turn left on Broad Street. Go one block and turn right on Washington Place. Go one block and turn left on Halsey Street. Go one block and turn right on Central Avenue. Make the third left on MLK Blvd. At first light, turn right on Warren Street. Go two blocks to Colden Street. Make a left on Colden Street.

**New York Thruway:** Thruway to Exit 14A, Garden State Parkway. Follow GSP directions above.

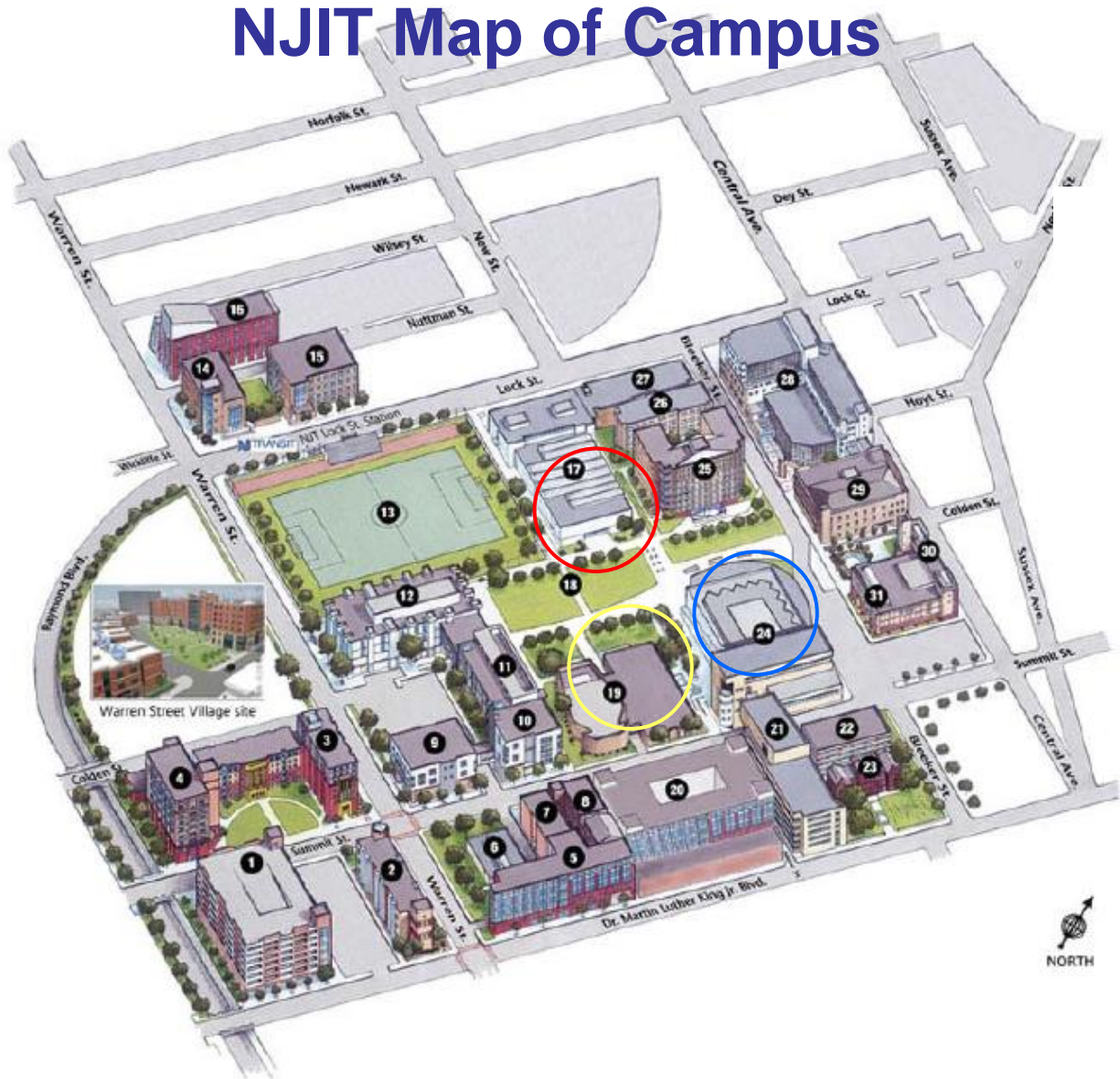
**George Washington Bridge:** NJ Turnpike South to Exit 15W. Follow Route 280 West directions above.

**Lincoln Tunnel:** West on Route 3 to NJ Turnpike South to Exit 15W. Follow Route 280 West directions above.

**From Brooklyn, Queens and Long Island:** Take Verrazano-Narrows Bridge (Interstate 278) and follow 278 across Staten Island. Cross Goethels Bridge. Follow signs to New Jersey Turnpike North then follow New Jersey Turnpike directions above.



# NJIT Map of Campus

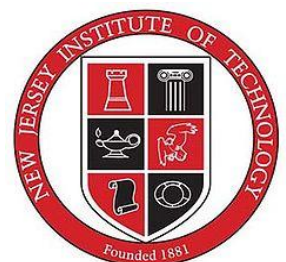


- |                                                          |                                                |                                                       |
|----------------------------------------------------------|------------------------------------------------|-------------------------------------------------------|
| 1. Student Mall / Parking Deck                           | 12. Tiernan Hall                               | 23. Eberhardt Hall /Alumni Center                     |
| 2. York Center for Environmental Engineering and Science | 13. Lubetkin Field at J. Malcolm Simon Stadium | 24. Campus Center                                     |
| 3. Laurel Residence Hall                                 | 14. CHEN building                              | 25. Cypress Residence Hall                            |
| 4. Oak Residence Hall                                    | 15. Enterprise Development Center 2            | 26. Redwood Residence Hall                            |
| 5. College of Architecture and Design                    | 16. Enterprise Development Center              | 27. Naimoli Family Athletic and Recreational Facility |
| 6. Specht Building                                       | 17. Estelle and Zoom Fleisher Athletic Center  | 28. Guttenberg Information Technologies Center        |
| 7. Colton Hall                                           | 18. The Green                                  | 29. Mechanical Engineering Center                     |
| 8. Campbell Hall / Student Services                      | 19. Kupfrian Hall                              | 30. Central Ave Building                              |
| 9. ECE Building                                          | 20. King Building                              | 31. Van Houten Library                                |
| 10. Microelectronics Center                              | 21. Fenster Hall / Admissions                  |                                                       |
| 11. Faculty Memorial Hall                                | 22. Cullimore Hall                             |                                                       |

**Competition will be held in #17 Zoom Fleischer Athletic Center**

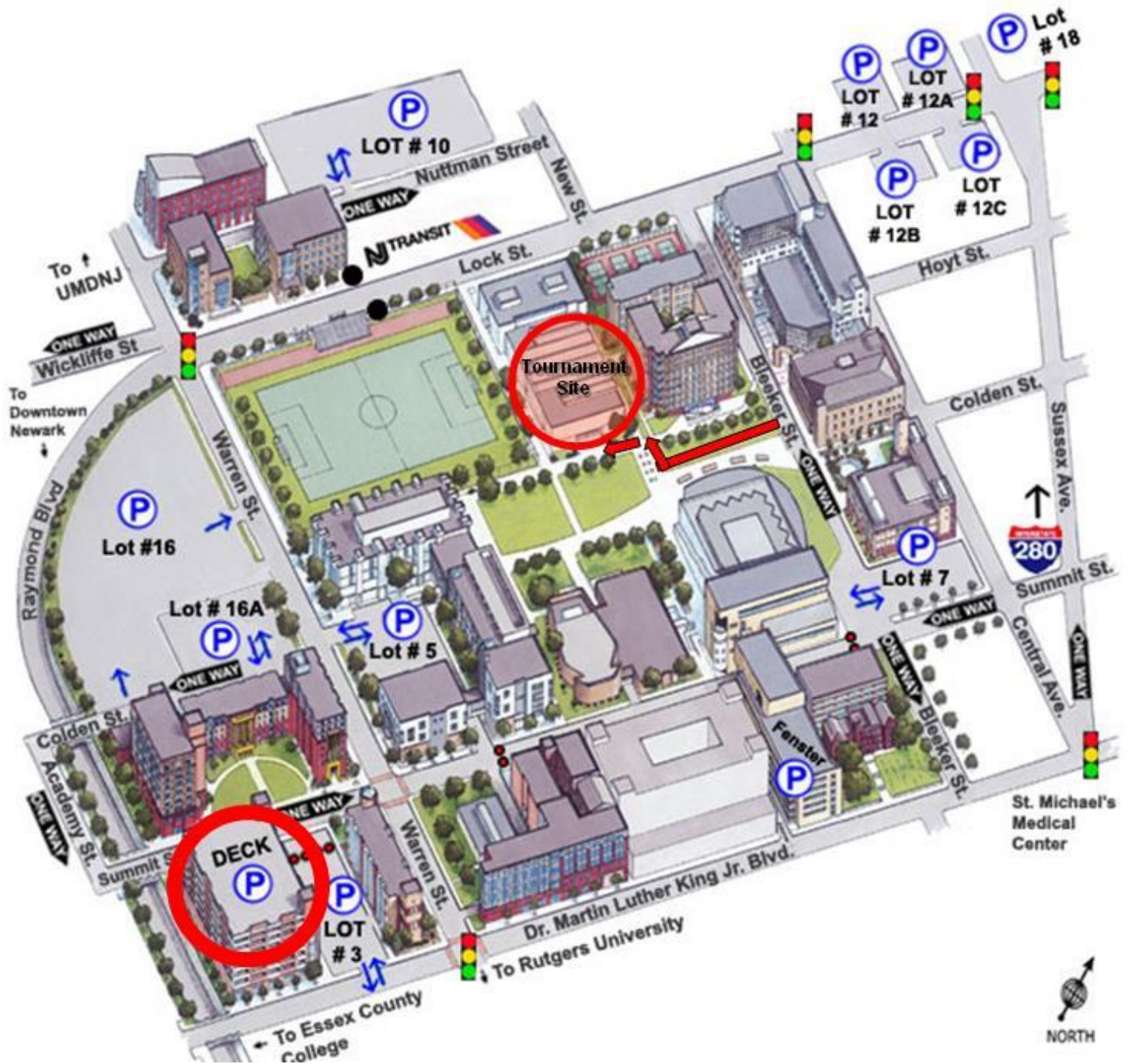
**Judged Interviews will be held on the lower floor of Kupfrian Hall. The building number is #19. (This is where NJ FTC August Workshops are held.)**

**Food Court is at #24, the Campus Center**





# NJIT – Drop Off & Parking



1. Teams and Robot Materials can unload on Blecker Street at the point closest to the Athletic Center. See the red arrows, above.
2. General Parking for the NJ FTC Championship is in the secure NJIT Parking Deck.
3. Slots are available for the schools who have advised us of Bus Parking need. Contact us asap if you have not advised us of your need.