

**2018 – 2019 Drillbotics® FAQ Update
Revision 2**

8 January 2019

1. If we have a question, how do we contact the committee?
Email your question to 2019@Drillbotics.com Also submit monthly reports to this address starting at the end of your first month of classes after you form your team.
2. How do we register our team?
*Go to the drillbotics.com website to the Guidelines page and complete the online form at the bottom of the page.
<https://drillbotics.com/guidelines/>*
3. Are travel expenditure estimates to be included in the \$10,000 limit?
No
4. Is it mandatory to use the drillstring provided or can we make our own?
Yes, for the test we will send you tubing. You provide the rest. Same as all previous years.
5. Are costs for rock samples that we use for testing to be included in the \$10,000 limit?
No
6. We've seen updates on the drillbotics competition on your website but we do not know if it's for group A or group B
The updates relate to Group A. Group B still follows the 2017-2018 guidelines. Please note that the pipe is 0.049 wall for both groups.
7. The Guidelines mentioned that the pipe specifications could change. What was the final specification?
As shown below, the FAQ Rev 1 of 26 November per item 3.8
8. Is it okay for us to add new team members?
If someone quits or is forced off the team, you may replace them. You are allowed up to 5 team members. It is certainly okay if they attend the same school. If they attend a different school, that may be okay as well. We just need to know how they fit into your team and why you chose this particular person.
9. I was wondering what is the highest score objective for the directional drilling part. After the last reply I had on my comment, I understand

that obtaining the highest build up rate (inclination) with 0 r 180 deg. azimuth gives the highest score. One more thing is the sample position; the 12 in dimension of the sample would be parallel to the S/E or the 24 in?

Please see the post on the website and look at the appendix of the guidelines for scoring.

10. What is the maximum height of the rock sample?

The rock will be approximately 24" tall (610 mm). It will be placed on two pieces of lumber/wood so that it can be handled with a forklift.

The height of the wood is approximately 1.75" (44.5 mm) for a total height of 25.75" (654 mm).

11. Is it okay for a team to submit its video by providing a link to YouTube?

No, for the committee to post the video on the Drillbotics website in June, we need a separate file to we can upload. If you video file is too large to email, please provide a link to a share site where the committee can access it.

12. If we are using the same rig design as in previous years, do we need to include all the design calculations in our design report?

Absolutely! This is a design competition. You must show the committee that you understand the engineering principles applicable. You should be prepared to answer questions from judges to demonstrate that you also understand how you arrived at the assumptions that you made in your design.

A new version of the 2018-2019 Guidelines dated 26 Nov 2018 was posted. Minor changes were included. Additional changes that are considered more significant follow:

- 3.1 The problem statement was changed from drilling a horizontal well to drilling a deviated well.
- 3.2 Eliminated redundancies and added references to the sections with specific instructions.

- 3.4.3 Depth measurements shall use the rig floor as the depth datum.
- 3.5 Reorganized
- 3.6 Renumbered this section, and ...
 - 3.6.2 Indicated where the well center will be when drilling commences.
 - 3.6.3 Teams drill a pilot hole prior to the test, not to exceed 1" deep, as per previous competitions. [Comment: This hole will be extended when the test commences – see Section 3.16.]
- 3.7 [Comment: Teams have an option of which bit they will use at the Phase II test. They may use the DSATS bit (1.25 inch diameter), or a bit they provide, not to exceed 1.50 inch diameter]
 - 3.7.3 An error when posting information about the bit diameter may have led to confusion and could affect teams who designed equipment based on the erroneous diameter. Therefore, teams may substitute a bit of their own design or a purchased bit not to exceed 1.5 inches in diameter and not more than 2 inches long. While this may allow some additional space for building the downhole equipment, it could also affect the build rate of the directional wellbore. It may also induce additional torque that could affect drillstring forces. Teams must evaluate the benefits and drawbacks of each and are encouraged to provide this analysis in their Phase I design report that describes what different forces are expected and their impact on drilling operations.
- 3.8 [Comment: Note that the pipe/tubing provided by DSATS will be aluminum, as per previous competitions. Although there were some discussions of replacing this with stainless steel due to excessive bending if the well were horizontal, with the directional well requirements, aluminum tubing is adequate.]
- 3.16 Reorganized
- 7.0 Revised timeline to reflect the two test sites instead of tests at each school.

