

## **IRRIGATION DESIGN**

**Description:** The student (maximum of one individual per school) will be required to answer a series of questions and/or problems pertaining to the irrigation design applications related to a sample residential and/or commercial project. The questions will be objective in nature, multiple choice. Some drawing and design calculations may also be required.

The design portion of the event may include, but not limited to:

- Questions on appropriate selection and positioning of irrigation equipment
- Zoning the system based on plant types, exposure, water supply and equipment type
- Pipe layout and sizing
- Sprinkler head layout
- Hydraulic calculations to determine a working pressure at a particular sprinkler head and/or available flow and pressure at the source
- Selection of appropriate back flow protection devices for connection to a potable water supply
- Scheduling
- Precipitation rates
- Material take offs

**Time:** 1 hour, 50 minutes to complete the design event on Thursday evening. There is no preliminary exam.

**Limits:** There are no limits on the number of schools competing in the exam.

## **JUDGING CRITERIA**

**Points:** 100 possible points for the individual score; the individual score is doubled toward the team score for a total of 200 possible points.

Points will be awarded based on predetermined answers.

Time will only be used as a tiebreaker.

**Students are required to bring the following materials to the event:**

- Engineer and architect scale
- Calculator
- Two sharpened pencils with erasers.
- Map measuring wheel

**Sponsor is required to supply the following materials for the event:**

- 75 - 100 copies of the problems and/ or applications pertaining to a design
- Equipment and technical data manuals
- Scratch paper
- Stopwatches
- Sufficient number of judges and event monitors
- Any other items deemed necessary for this event

[Click here for past irrigation designs to help prep for this year's event](#)