

# 2020 Missouri LICA Drainage Workshop

## Designing & Installing Subsurface Agricultural Drainage Systems

February 12-14, 2020  
Macon Comfort Inn ♦ Macon, MO

### WEDNESDAY, FEBRUARY 12

- Noon Registration
- 1:00pm Welcome and Introductions
- 1:15pm Introduction to Drainage Water Management (*Section 1*)
- 1:30pm MU Drainage and Sub-irrigation (MUDS) Research Update (*Section 2 & 3*)
- 2:30pm Water Movement in Soils (*Section 4*)
- ♦ Processes and Terminology
  - ♦ Important Soil Properties
  - ♦ Hydraulic Conductivity
  - ♦ Soil Water Concepts
- 3:15pm Break
- 3:30pm Engineering Standards and Specs (*Section 5*)
- Planning Considerations (*Section 6*)
- ♦ Needs: Surface or Subsurface Drainage, Water Table Management, or Nutrient Management
  - ♦ System Layout & Outlet Locations
  - ♦ Utilities Determination - One-Call
- Subsurface Drain Design, Pipe Capacity
- ♦ Class Problem 1, Using Design Tables and Standards (*Section 8*)
- 5:00pm Adjourn for the day

### THURSDAY, FEBRUARY 13

- 8:00am Class Problem 2 & 3 - Using Design Tables and Standards (*Section 8*)
- 8:45am Lateral Design (*Section 6*)
- 9:15am Making a Topographic Map from Survey Points (*Section 7*)
- 9:45am Break
- 10:00am Class Problem 4 (*Section 8*)

### THURSDAY, FEBRUARY 13 (Cont.)

- 11:15am Planning Considerations (*Section 4*)
- ♦ The importance of an On-Site Evaluation of Soil Properties
  - ♦ Wetland Determination
  - ♦ Web Soil Survey
- 12:00pm Lunch Provided
- 1:00pm Class Problem 5 – System Design (*Section 8*)
- 2:30pm Class Problem 5 – Review & Discussion
- 3:00pm Break
- 3:15pm TSP Provider Training (*Section 6*)
- 3:45pm Class Problem 6 (*Section 8*)
- ♦ Field Topographic Map
  - ♦ Soils, Other Information, Web Soil Survey
- 5:00pm Adjourn for the day

### FRIDAY, FEBRUARY 14

- 8:00am Pipe Installation Considerations (*Section 9*)
- 8:30am Continue work on Design Problem 6
- 9:45am Break
- 10:00am Presentation and Summary of Problem 6 Drainage Design
- 11:00am Nitrogen Treatment for Drainage Systems (*Section 3*)
- 12:00pm Lunch Provided
- 1:00pm Contractor/Industry/Farmer/University Panel Discussion
- Final Questions, Summary & Evaluation
- 3:00pm Adjourn
- Post Workshop Tour of Holistic Drainage Water Recycling Project at Grace Greenley Farm in Novelty, MO