

PA442. IRRIGATION SYSTEM, SPRINKLER DESIGN AND CHECK DATA REQUIREMENTS

The following items must be addressed in the design folder for the *Sprinkler* Irrigation System.

Planning Information

The following is a list of the minimum data and documentation to be recorded:

1. Description of the objectives of the practice, including the desired functions which the micro irrigation system is expected to provide.
2. Location and extent of the micro irrigation system. Also note the location and extent of the practice on the conservation map.
3. Soils information as appropriate for the proposed practice.
4. Topographic, profile, or cross section survey information as appropriate for the site conditions and the proposed design.
6. Support data for nozzle (e.g. spacing(s), height, and discharge), valves, controllers, and pump selection.
7. Reinforcement and strength of concrete in settling and pump tanks, or other concrete structures.
8. Quantity computations and cost estimates.
9. Complete Section 6 of PA442 Construction Specification.
10. E&S Control Plan.
11. Vegetation Plan.
12. O&M Plan.

Design Record

1. Documented compliance with Pennsylvania One Call.
2. Plan view map showing; Location of all planned practices and components, apparent property lines, and existing water courses, and the planned water source.
3. System capacity calculations.
4. Pipe sizes, velocities, and locations.
5. Depth of application, application rate, frequency, pressure, distribution patterns (uniformity coefficient), and soil types.

Check Data Record

1. Extent of completed work (as-built drawings with red line conformance and changes).
2. Location and dimensions of pipelines, and other appurtenances (valves, tanks, etc.).
3. Minimum cover and grade-lines for underground pipelines.
4. Material certifications, including make, model, and performance data for all nozzles, pumps, and other related appurtenances.
5. Record of site visits, including photos.
6. Contractor's certification of conformance.