

IRRIGATION SYSTEM, SPRINKLER

The following information shall be obtained and recorded in the field notes:

- a. Water surface elevation or well elevation and depth to water.
- b. Elevations of areas to be served and critical.
- c. Lengths of pipe required.

Design Data

The following shall be considered minimum in the design of all sprinkler irrigation systems. The information shall be recorded in the design notes. Appropriate data will be transferred to the construction drawings and the O&M report.

- a. Structure design.
- b. Area to be served.
- c. Soils information and related rate of application and moisture-holding capacity.
- d. Crops to be irrigated along with P.C.U.
- e. Hydraulics of system:
 1. Pump view of system (including area served).
 2. Main line sizing.
 3. Lateral line sizing and spacing.
 4. Sprinkler nozzle sizing and spacing.
 5. Appurtenance selection and sizing.

Drawings and Specifications

The construction drawings shall include, but will not be limited to, the following:

- a. Plan view of system (including area served).
- b. Size, type, and class of pipe required.
- c. Appurtenance size, type and location.
- d. Structure details.
- e. Table of quantities.
- f. Location map.

Practice specifications, along with applicable "Item of Work and Construction Details," shall be provided for each item or phase of construction.

Layout Survey Notes

Layout survey notes will depend on the complexity of the system. Smaller systems involving no structures or buried pipe will not require layout survey notes. On the more complex systems

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involving structures and buried pipe, the following layout survey notes shall be recorded in the field notes.

- a. Location and alignment stakes.
- b. Grade stakes with offset references stakes.

Compliance Checks

The complexity of the installation will dictate the need for compliance checks during construction. All compliance checks shall be recorded in the field notes. Narratives of construction checks shall be recorded in the job diary or on a sheet in the field notes. Compliance checks shall include, but will not be limited to, the following.

- a. Profile of buried pipeline.
- b. Dimensions and elevations of structure(s).
- c. Lengths, diameters, class or type of pipe.
- d. Location, sizes, and types of appurtenances.
- e. Statement of compliance.

As-Built Plans

As-built drawings shall be prepared for all permanently installed phases of the installation. These drawings shall reflect all significant changes in measurements, quantities, alignment, or material changes. If there were no significant changes, the original drawings shall be marked "As-Built".

OPERATION AND MAINTENANCE INSTRUCTIONS

Operation and maintenance instructions shall be provided for all sprinkler systems. These instructions shall outline the designed application rate, time of application, cycle time, number of laterals, maintenance requirements, and operation procedures required to avoid damaging the system.

Note: Supplier or contractor designed installation will usually not have all the items listed above. Use the list to check the design and installation, making certain that the file contains an accurate location map and certification of any cost-shared quantities.