

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION

**442A - IRRIGATION SYSTEM, SPRINKLER
ABOVE GROUND MAINLINES AND LATERALS**

I. SCOPE

The work will consist of furnishing and installing materials as required to provide for a complete hand move tubing sprinkler irrigation system for the tract of land as shown on the drawings.

II. INSTALLATION

A. Materials:

Aluminum Tubing

Aluminum tubing shall be manufactured according to ASTM Standard B-209, B-210, B-241, or B-313 as appropriate.

H-26 temper material may be used to manufacture pipe in ASTM B-313 providing the H-26 temper material meets the tensile strength and the yield strength requirements of H-36 temper material as given in ASTM B-209.

PVC

PVC pipe shall meet requirements found in ASTM D2241 except as noted in Table 2. PVC compound used to extrude pipe must meet 12454-cell classification per ASTM D1784. Compound must contain sufficient UV stabilizer as to allow the finished tubing to pass the original factory specifications for quick burst (ASTM D1599-99) and impact performance (ASTM D2444-9) after 10-years usage in the field under normal UV exposure. Manufacturer will provide independent 3rd-party lab data demonstrating conformance to these requirements.

Table 2

Nominal Pipe Size	Max SDR	Min. impact Test resistance (ft-lb)
3"	32.5	120
4"	21	255
6"	32.5	250
8"	32.5	300
10"	32.5	350
12"	32.5	400

All PVC pipe will be marked by the manufacturer indicating:

1. Nominal pipe size
2. Type of plastic material (for example, PVC 1120)
3. Pressure rating in lb/in², for water at 73 degrees F
4. Adherence to ASTM D2241 on sizes 4", 6", 8", 10", 12"
5. Adherence to 1254-cell classification on later 3"
6. Manufacturer's name or production code

B. Joints and Connections:

All joints and connections shall be capable of withstanding the design maximum working pressure the pipeline without leakage and shall leave the inside of the line free of any obstruction that can reduce the capacity below the design requirements.

All rubber seals and gaskets in main lines shall be the "no drain" type. Lateral line joints may use either "drain" or "no drain" type gaskets.

C. Field Assembly and Performance

The materials shall be assembled in accordance with the manufacturer's instructions. The system shall be tested to determine if the system is in proper working order, and will deliver the required capacity to meet the crop consumptive use, and the specified distribution uniformity rate.

III. BASIS OF ACCEPTANCE

The basis of acceptance shall be the ability of the system to deliver the required amount of water to meet the peak consumptive use of the crop, with a distribution uniformity rate (DU) of 80% or greater.

A field inspection will be made to determine the quality and quantity of materials. All pipe must be permanently marked (by engraving or acid etching ink) with the landowner's ID number (as provided by the Rural Crime Prevention Program of the County Sheriff's Department).

OPERATION AND MAINTENANCE ITEMS

A properly operated and maintained sprinkler irrigation system is an asset. This irrigation system was designed and installed to apply irrigation water to meet the needs of the crops without causing erosion or runoff. The estimated life span of this installation is at least 10 years. The life span of this system can be assured and usually increased by developing and carrying out a good operation and maintenance program.

Only operate the system when needed to furnish water for plant growth, the soil may also be used to store moisture within the rooting depth of the plant.

Operate the system at the pressure discharge rate duration, and frequency as designed.

Periodically check the sprinkler heads for wear and replace when defective or excessive wear is found.

Monitor the crop noting areas of moisture stress and repair or adjust system operation.

Promptly repair all leaks, by replacing gaskets or worn parts.

During non-seasonal use place the system in a secure area where it will not be damaged.

Maintain all pumps, piping, valves and other electrical and mechanical equipment in good operating condition following the manufacturers' recommendations.

Do not allow livestock near equipment or in area during operation.

Immediately repair any vandalism, vehicular or livestock damage.

Other items specific to your project are listed on the "Practice Requirement" sheet.

U.S DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
CALIFORNIA

**PRACTICE REQUIREMENTS
FOR
442A - IRRIGATION SYSTEM, SPRINKLER
ABOVE GROUND MAINLINES AND LATERALS**

For: Business Name _____

Job Location _____

County _____ RCD _____ Farm/Tract No. _____

Referral No. _____ Prepared By _____ Date _____

IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO OBTAIN ALL NECESSARY PERMITS AND/OR RIGHTS, AND TO COMPLY WITH ALL ORDINANCES AND LAWS PERTAINING TO THIS INSTALLATION.

Installation shall be in accordance with the following drawings, specifications and special requirements. NO CHANGES ARE TO BE MADE IN THE DRAWINGS OR SPECIFICATIONS WITHOUT PRIOR APPROVAL OF THE NRCS TECHNICIAN.

1. Drawings, No. _____

2. Practice Specifications _____, _____, _____

3. Special Requirements: _____

4. Special Maintenance Requirements: _____

PRACTICE APPROVAL:

Job Classification: (Ref: Section 501 NEM)

Show the limiting elements for this job. This job is classified as, Class _____

Limiting elements:	Units
_____	_____
_____	_____
_____	_____
_____	_____

Design Approved by: _____ Date: _____

LANDOWNER'S/OPERATOR'S ACKNOWLEDGEMENT:

The landowner/operator acknowledges that:

- a. He/she has received a copy of the construction drawings and specification, and that he/she has an understanding of the contents, and the requirements.
- b. He/she has obtained all the necessary permits.
- c. No changes will be made in the installation of the job without prior concurrence of the NRCS technician.
- d. Maintenance of the installed work is necessary for proper performance during the project life.

Accepted by: _____ Date: _____

PRACTICE COMPLETION:

I have made an on site inspection of the site (or I am accepting owner/contractor documentation), and have determined that the job as installed does conform to the drawings and practice specifications.

Completion Certification by:

/s/ _____ Date _____