MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**MAINTAINING WATER SPRINKLER SYSTEM**

SIG:JYP 1 of 2 APPR:DMG:NJM:07-16-21

**a. Description.** This work consists of repairing and replacing existing automatic sprinkler heads, valves, boxes, piping, electrical power feeds and appurtenances within the project limits.

**b. Materials.**

1. Furnish Schedule 40, Type 1120-1220 PVC pipe in accordance with *ASTM D1785*.

2. Furnish Type 1, medium weight Schedule 40 PVC fittings as manufactured by LASCO Manufacturing Company, Spears or approved equal.

3. Furnish solvent cement compatible with PVC pipe for this application in accordance with *ASTM D2564*.

**c. Construction.** Notify the property owner in writing at least 14 calendar days prior to the start of the work performed in the water sprinkler areas. Remove and salvage all impacted sprinkler heads. Replace, in-kind, any sprinkler heads damaged by the Contractor at no cost to the contract. Mark the location of the removed heads, plug and cap the existing line. Ensure that the portion of the sprinkler system that is unaffected by the construction remains operational. Reinstall the salvaged sprinkler heads or the in-kind replacements. Perform tests for leaks in the areas damaged by the Contractor. Determine the proper grade and height of the reinstalled sprinkler heads and obtain approval from the Engineer and property owner. Reconnect any electrical power disrupted by the Contractor during this work.

1. Pipeline Assembly. Solvent weld PVC pipe and fittings using solvent and methods as recommended by manufacturer of the pipe, except where threaded connections are required. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.

2. Sprinkler Heads. Use pipe joint compound on all threaded ferrous joints. Use Polytetrafluoroethylene (PTFE) tape for threaded joints in PVC assemblies.

3. Closing of Pipe and Flushing Lines.

A. Cap or plug all openings as soon as the heads have been removed to prevent the entrance of materials that would obstruct the pipe. Leave temporary caps in place until removal is necessary for reinstallation of the heads.

B. Thoroughly flush out all water lines before installing heads, valves and other hydrants.

C. Test in accordance with subsection c.4 of this special provision.

D. Upon completion of the testing, complete assembly and adjust sprinkler heads for proper distribution.

4. Hydrostatic Tests.

A. Request the presence of the Engineer in writing at least 2 working days in advance of testing.

B. Test pipe at 160 psi or at the rated pressure of the pipe, whichever is lower for 2 hours, to identify any potential leaks at operating pressure.

C. Repair leaks resulting from failed tests and retest.

D. Retest as required due to failure of any system components to pass hydrostatic testing at no additional cost to contract.

5. Backfill and Compaction. Backfill, compact, and adjust to proper grade with suitable, excavated material approved by Engineer.

6. Clean Up. Remove all debris resulting from the repair and/or replacement of the sprinkler system once work has been completed on the property. Complete restoration of all disturbed areas in accordance with the standard specifications.

**d. Measurement and Payment**. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**Pay Item Pay Unit**

Maintaining Water Sprinkler System Each

**Maintaining Water Sprinkler System** includes fittings, temporary caps, salvaging sprinkler heads, temporary storage of the sprinkler heads, reinstalling sprinkler heads, valves, boxes, testing, electrical work, and additional pipe.

Each individual property with a water sprinkler system that needs maintenance will be measured as one system each for payment under this pay item.

The Contractor has the option, at no additional cost to the contract, of installing all new in-kind heads versus salvaging the existing heads.

Restoration of disturbed areas will be paid for separately.