**NOMENCLATURE**

- $D$ = DIAMETER OF RISER PIPE AND NOMINAL DIAMETER OF ALFALFA GATE
- $D_1$ = DIAMETER OF UNDERGROUND PLASTIC PIPE

**TYPE I RISER**

RECOMMENDED WHEN VELOCITY IN RISER EXCEEDS 3.5 FEET PER SECOND AND HYDRANTS ARE NOT USED.

- OPENING BROKEN OUT
- 90°+
- OVERSIZED CONCRETE PIPE
- FIELD SURFACE
- ALFALFA VALVE OR MODIFIED ALFALFA VALVE
- PLASTIC PIPE

**TYPE II RISER**

RECOMMENDED WHEN VELOCITY IN RISER IS LESS THAN 3.5 FEET PER SECOND OR WHEN HYDRANTS ARE USED.

- OPENING BROKEN OUT
- 90°+
- OVERSIZED CONCRETE PIPE
- FIELD SURFACE
- ALFALFA VALVE OR MODIFIED ALFALFA VALVE
- PLASTIC PIPE

**TYPICAL FRAME FOR ALFALFA VALVE**

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**ALFALFA VALVE**

**TYPICAL HYDRANT**

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**ALFALFA VALVE OR MODIFIED ALFALFA VALVE OUTLET FOR PLASTIC PIPELINES**

(REVISIEd LAST ON 10-09)
SPECIAL NOTES

1. All fittings, such as couplers, reducers, bends, tees, and crosses shall be installed in accordance with the manufacturer's recommendations. All fittings shall have a pressure rating equal to or exceeding the pipe with which they are used. They shall be made of material that is recommended for use with the pipe by the manufacturer.

2. Riser pipe
   a. The velocity in the riser shall be less than 5 feet per second when the type I outlet is used. (See type I riser).
   b. The velocity in the riser shall be less than 3.5 feet per second when the type II outlet is used. (See type II riser).

3. The frame for the alfalfa valve shall be compatible with the plastic riser pipe. Normally, this frame is pressed snugly inside the riser pipe and is then glued or held in place with draw bands. The pipe may need to be warmed to allow easier installation. The installation recommendations of the alfalfa valve manufacturer shall be followed.

4. The following table may be used as a guide to the maximum head to be used with alfalfa valves. The current maximum heads recommended by the alfalfa valve manufacturer shall be used as a final determinant of allowable head.

<table>
<thead>
<tr>
<th>Riser Dia. (in.)</th>
<th>Max. Operating Head (ft.)</th>
<th>Max. Static Head (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6, 8, 10, 12</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>14</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

5. Cross out the riser type that does not apply and write "DELETE" across the cross section.

6. Standardized designs — must be adapted to the specific site.