<table>
<thead>
<tr>
<th>Drawing</th>
<th>Sheets</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-1</td>
<td>1</td>
<td>Water Service Installation</td>
</tr>
<tr>
<td>8-2</td>
<td>1</td>
<td>Fire Hydrant Installation Water Main in Street</td>
</tr>
<tr>
<td>8-3</td>
<td>1 of 2</td>
<td>Thrust Block Bearing Area</td>
</tr>
<tr>
<td>8-3</td>
<td>2 of 2</td>
<td>Pipe Restrained Length</td>
</tr>
<tr>
<td>8-4</td>
<td>1</td>
<td>Locating Wire for Water Mains and Services</td>
</tr>
<tr>
<td>8-5</td>
<td>1</td>
<td>Valve Box Installation and Operating Nut Extension</td>
</tr>
<tr>
<td>8-6</td>
<td>1 of 2</td>
<td>1-½” &amp; 2” Metered Water Service</td>
</tr>
<tr>
<td>8-6</td>
<td>2 of 2</td>
<td>3” to 6” Meter Installation</td>
</tr>
<tr>
<td>8-7</td>
<td>1 of 2</td>
<td>Fire Sprinkler Service - Residential</td>
</tr>
<tr>
<td>8-7</td>
<td>2 of 2</td>
<td>Fire Sprinkler Service - Commercial</td>
</tr>
<tr>
<td>8-8</td>
<td>1 of 2</td>
<td>Pressure Reducing Backflow Preventer 1” to 3”</td>
</tr>
<tr>
<td>8-8</td>
<td>2 of 2</td>
<td>Pressure Reducing Backflow Preventer 4” and larger</td>
</tr>
<tr>
<td>8-9</td>
<td>1</td>
<td>Maximum Deflection for PVC Pipe</td>
</tr>
<tr>
<td>8-10</td>
<td>1</td>
<td>Utility Crossing</td>
</tr>
<tr>
<td>8-11</td>
<td>1</td>
<td>Utility Crossing under Existing Water Main</td>
</tr>
<tr>
<td>8-12</td>
<td>1</td>
<td>2” Temporary Blow Off Assembly</td>
</tr>
<tr>
<td>8-13</td>
<td>1</td>
<td>4” Blow Off Assembly at End of Main</td>
</tr>
<tr>
<td>8-14</td>
<td>1</td>
<td>Combination Air/Vacuum Valve</td>
</tr>
<tr>
<td>8-15</td>
<td>1</td>
<td>Cut-in</td>
</tr>
<tr>
<td>8-16</td>
<td>1</td>
<td>Non-Potable Recycled Water Warning Sign</td>
</tr>
</tbody>
</table>
NOTES:

1. CORPORATION STOP, METER CURB STOP AND WATER SERVICE LINE ARE TO BE THE SAME SIZES.
2. SERVICE SADDLES SHALL HAVE A SINGLE WIDE BRONZE STRAP FOR 1" AND 2" SERVICES. DOUBLE STRAPS, FLATTENED TO PROVIDE A WIDE BEARING SURFACE AGAINST THE PIPE, SHALL BE USED FOR SERVICE SADDLE SIZES LARGER THAN 2 INCHES. BRONZE 'U' BOLTS (NOT FLATTENED) MAY BE PLACED ON PVC AND DUCTILE IRON WATER MAINS.
3. SERVICE SADDLES, CORPORATION STOPS, COUPLING NUTS, BOLTS, AND ALL APPURTENANCES SHALL BE BRONZE.
4. SERVICE TAP MUST BE MADE BETWEEN 20 DEGREES TO 50 DEGREES ABOVE THE SPRINGLINE OF THE PIPE.
5. SERVICE TAPS SHALL BE A MINIMUM OF 18" APART ALONG THE WATER MAIN.
6. INSULATED LOCATING WIRE REQUIRED ON ALL SERVICE LINES, SEE DRAWING 8–4. WIRE SHALL BE CONNECTED TO LOCATING WIRE ALONG WATER MAIN FOR CONTINUITY.
NOTES:
1. IN COMMERCIAL AREAS, FIRE HYDRANTS SHALL BE PROTECTED FROM VEHICULAR DAMAGE BY BOLLARDS AND SHALL BE ACCESSIBLE TO FIRE PROTECTION EQUIPMENT.
2. TYPE OF FIRE HYDRANT SHOWN IS FOR ILLUSTRATION ONLY.
3. GATE VALVE SHALL BE FLANGED TO THE WATER MAIN.
4. LOWEST CAP NUT ON HYDRANT SHALL BE 18" MIN. TO 24" MAX. ABOVE TOP OF CONCRETE PAD.
5. THESE JOINTS MAY BE FLANGED, OR RESTRAINED MECHANICAL JOINTS WITH COUNTY APPROVED RESTRAINING DEVICE.
6. 2-WAY BLUE REFLECTIVE MARKER TO BE PLACED 6" FROM STREET CENTERLINE ON THE SIDE TOWARDS THE HYDRANT.
7. WRAP ALL DUCTILE IRON PIPE AND FITTINGS IN 4-MIL HDPE.
8. FOR STREETS WITH PLANTER STRIPS, HYDRANTS SHALL BE LOCATED ON THE STREET SIDE OF THE SIDEWALK.
### REQUIRED BEARING AREA IN TOTAL SQUARE FEET

<table>
<thead>
<tr>
<th>TYPE OF FITTING</th>
<th>90° BEND</th>
<th>45° BEND</th>
<th>11-1/4&quot; BEND</th>
<th>TEE OR DEAD END</th>
<th>TEE WITH PLUG</th>
<th>CROSS WITH PLUG</th>
<th>CROSS WITH PLUGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPICAL INSTALLATION</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
<td><img src="image7" alt="Diagram" /></td>
</tr>
<tr>
<td>SIZE OF PIPE</td>
<td>6”</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8”</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10”</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12”</td>
<td>16</td>
<td>10</td>
<td>5</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
1. THRUST BLOCKS ARE TO BE CONSTRUCTED OF CLASS "B" CONCRETE.
2. BEARING AREAS GIVEN ARE FOR CLASS 150 PIPE AT TEST PRESSURE OF 150 PSI IN SOIL WITH 2,000 PSF BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL.
3. THRUST BLOCKS ARE TO BE POURED AGAINST UNDISTURBED SOIL.
4. PIPE JOINTS ARE TO BE KEPT CLEAR OF CONCRETE.
5. 6” PIPE FOR HYDRANTS ONLY.
## Restrain Length in Feet

<table>
<thead>
<tr>
<th>Pipe Configuration</th>
<th>Depth of 36&quot;</th>
<th>Depth of 60&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6&quot; 8&quot; 10&quot; 12&quot;</td>
<td>6&quot; 8&quot; 10&quot; 12&quot;</td>
</tr>
<tr>
<td>In Line Valve</td>
<td>DIP C P D D C P</td>
<td>DIP C P D D C P</td>
</tr>
<tr>
<td></td>
<td>38 24 45 31 58 38 70 46</td>
<td>38 24 45 31 58 38 70 46</td>
</tr>
<tr>
<td>Valve at Tee</td>
<td>DIP C P D D C P</td>
<td>DIP C P D D C P</td>
</tr>
<tr>
<td>(See Note 3)</td>
<td>6 3 2 17 13 37 24 48 33</td>
<td>3 2 12 10 20 19 30 26</td>
</tr>
<tr>
<td></td>
<td>8 2 2 12 8 27 19 43 30</td>
<td>2 2 6 5 17 15 27 24</td>
</tr>
<tr>
<td></td>
<td>10 2 2 4 3 19 15 39 28</td>
<td>2 2 2 2 12 11 24 21</td>
</tr>
<tr>
<td></td>
<td>12 2 2 2 2 14 10 32 24</td>
<td>2 2 2 2 10 8 20 19</td>
</tr>
<tr>
<td>Valve at Cross</td>
<td>DIP C P D D C P</td>
<td>DIP C P D D C P</td>
</tr>
<tr>
<td>(See Note 5)</td>
<td>6 2 2 18 15 41 26 50 34</td>
<td>16 15 23 21 30 24 38 30</td>
</tr>
<tr>
<td></td>
<td>8 2 2 16 12 32 20 44 32</td>
<td>2 2 6 4 18 16 29 26</td>
</tr>
<tr>
<td></td>
<td>10 2 2 4 4 20 17 40 32</td>
<td>2 2 2 2 14 12 26 24</td>
</tr>
<tr>
<td></td>
<td>12 2 2 3 2 18 14 34 26</td>
<td>2 2 2 2 12 10 22 20</td>
</tr>
</tbody>
</table>

**Notes:**
1. All joints within the restrain length must be restrained.
2. If restrain length is greater than 20', ductile iron pipe with the bell restraining devices inside must be used for the entire restrained length.
3. Restraint length for the tee described, assumes a thrust block is installed at locations shown above. If thrust block is not installed restrain length must be approved by the county engineer.
4. This configuration is only to be used if a thrust block can not be poured behind the tee and against undisturbed soil.
5. Joints on pipes perpendicular (crossing pipes) to restrain length run, must be restrained for a min. of 4 feet.
6. The restrain lengths are based on a water pressure of 150 PSI. If higher pressure or higher surge pressures are anticipated, then this table does not apply and restrain length must be approved by the county engineer.
NOTES:
1. WIRE SHALL BE CONTINUOUS BETWEEN VALVE BOXES, EXCEPT AS NOTED.
2. LOCATING WIRE SHALL BE LAYED ON TOP OF THE WATER MAIN, AND SHALL BE TAPED TO IT OR THE POLYETHYLENE ENCASEMENT (IF THE PIPE IS DUCTILE IRON) AT 10' INTERVALS AND TAPED AT ALL FITTINGS. TAPE SHALL BE 10 MIL POLYETHYLENE.
3. CONTRACTOR SHALL CONDUCT A CONTINUITY TEST ON ALL LOCATING WIRE SPLICES.
4. ALL SPLICES SHALL BE SOLDERED.
5. WRAP ALL FITTINGS AND DUCTILE IRON PIPE IN CLEAR 4-MIL HDPE.
NOTES:

1. VALVE BOX AND RISER SHALL BE TRAFFIC RATED AND SET PLUMB AND CENTERED OVER WATER VALVE NUT.
2. SET VALVE BOX TO FINAL FINISH GRADE. IN AREAS WHERE THE FINISH GRADE HAS NOT BEEN DEFINED, PLACE 4"x4' LOCATING POST PAINTED BLUE WITHIN 1 FOOT OF VALVE BOX. POST SHALL BE 6 FEET IN LENGTH AND BURIED 3 FEET.
3. WRAP ALL FITTINGS AND DUCTILE IRON PIPE IN CLEAR 4-MIL HDPE.
NOTES:

1. REINFORCED CONCRETE UTILITY BOX. (CHRISTY B36 BOX, OR EQUIVALENT)

2. REINFORCED CONCRETE COVER WITH A HINGED CAST IRON LID AND WATER LABEL. (CHRISTY B36G COVER OR EQUIVALENT)

3. AMCO C700 WATER METER WITH "INSIDER" TRANSMITTER OR COUNTY APPROVED EQUIVALENT.

4. FLANGED WINGED ANGLE METER STOP WITH TEFILON COATED BALL.

5. OVAL FLANGED 90° BRONZE FITTING.

6. 1"X4"X16" CONCRETE BLOCK TO HELP SUPPORT VALVE BOX, USE ONE BLOCK ON ALL FOUR SIDES OF METER BOX. COVER ANY OPENINGS OR HOLES IN THE SIDE OF THE UTILITY BOX WITH CONCRETE BLOCK.

7. BRONZE COMPRESSION BY THREADED 90° FITTING.

8. ALL METAL PIPES AND FITTING THAT ARE BURIED SHALL BE ENCASED WITH 6 MIL PLASTIC SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS.

9. METER BOXES SHALL NOT BE INSTALLED IN SIDE YARD SWALES OR AREAS SUBJECT TO PONDING.

10. MARK ALL METER BOXES WITH A 2" HIGH "W" WET STAMPED ON FACE OF CURB.
NOTES:

1. WHEN NEEDED CONCRETE BLOCKS SHALL BE USED TO BLOCK ANY OPENING OR CUT OUT PORTIONS OF THE METER BOX NOT UTILIZED. (MINIMUM OF 1" THICK BLOCK ARE REQUIRED)

2. ALL 4" TO 6" DIA. PIPE BETWEEN THE WATER MAIN AND THE METER SHALL BE DUCTILE IRON WITH POLYETHYLENE ENCASEMENT AND 6-12 INCHES OF SAND BACKFILL AND 6-12 INCHES OF SAND BEDDING. JOINTS BETWEEN MAIN AND METER SHALL BE RESTRAINED.

3. 3" PIPE SHALL BE TYPE K COPPER OR BRONZE WRAPPED WITH 6 MIL PLASTIC AND HAVE SAND BEDDING AND BACKFILL. VALVES ON 3 INCH DIAMETER PIPE SHALL HAVE BRONZE CORPORATION AND CURB VALVES WITH TEFLOM COATED BALLS.

4. VALVES ATTACHED TO THE MAIN MUST HAVE FLANGED ENDS.

5. INSTALL LOCATING WIRE PER 8-4.

6. METER BOXES SHALL NOT BE INSTALLED IN SIDEYARD SWALES OR AREAS SUBJECT TO PONDING. METER BOXES SHALL BE INSTALLED BEHIND SIDEWALK.

7. WRAP ALL FITTINGS AND DUCTILE IRON PIPE IN CLEAR 4-MIL HDPE.

1 REINFORCED CONCRETE UTILITY BOX WITH EXTENSIONS.
(CHRISTY B48)
2 2 PIECE STEEL CHECKER PLATE WITH TWO 10" ROUND SELF-CLOSING READING LIDS .
(CHRISTY B48-62G COVER, OR EQUIVALENT )
3 ELSTER AMCO TS4000 WATERT METER OR COUNTY APPROVED EQUIVALENT, WITH AUTOMATIC METER READING CAPABILITY.
4 CONCRETE BLOCKS SHALL BE PLACED UNDER THE ENTIRE PERIMETER TO SUPPORT BOX.
5 3/4" CRUSHED ROCK SUB-BASE, 12" TO 18" DEEP, COMPACT TO 90% RELATIVE COMPACTION.
6 FLANGED COUPLING ADAPTER.
7 VALVE BOX AND LID. (SEE 8-5)
8 GATE VALVE, WITH BOTH ENDS FLANGED.
9 METER BOX EXTENSION. (TYPICAL)

COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT

3" TO 6" METER INSTALLATION

DATE: 08/05/08
SHEET # 2 OF 2
DRAWING #: 8-6
NOT TO SCALE
NOTES:
1. THE RESIDENTIAL SERVICE DETAILS ARE APPLICABLE ON SINGLE-FAMILY RESIDENTIAL SERVICES ONLY. ALL OTHERS SHALL USE THE COMMERCIAL STANDARDS.

2. FIRE SERVICE IMPROVEMENTS SHALL BE INSTALLED CONCURRENTLY WITH HOUSE CONSTRUCTION.

3. ALL IMPROVEMENTS SUBJECT TO COUNTY BUILDING PERMIT AND FIRE DISTRICT INSPECTION AND APPROVAL.

4. ALL CONNECTIONS SHALL BE THREADED OR GLUE JOINT ONLY.
NOTES:
1. ALL JOINTS TO BE FULLY RESTRAINED. ALL PIPE & FITTINGS SHALL BE DUCTILE IRON.

2. CONCRETE THRUST BLOCK WITH ONE PIECE OF #4 REBAR.

3. DOUBLE DETECTOR CHECK VALVE ASSEMBLY (AMES OR APPROVED EQUIVALENT), REDUCED PRESSURE TYPE, WITH OS&Y RESILIENT WEDGE GATE VALVES, REFER TO CURRENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES PUBLISHED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES. OS&Y VALVES TO BE LOCKED WITH FIRE DEPARTMENT APPROVED PADLOCK AND FITTED WITH TAMPER SWITCHES AS REQUIRED ON FIRE SYSTEM APPLICATION.

4. CHECK VALVE AND PIPE SHALL BE U.L.—F.M. APPROVED. REFER TO SECTION 8-16 FOR TESTING AND CERTIFICATION REPORT REQUIREMENTS.

5. INSTALLATION MAY VARY WITH FIELD CONDITIONS AND FIRE DEPARTMENT REQUIREMENTS.

6. WRAP BURIED DUCTILE IRON PIPE AND FITTINGS IN CLEAR 4-MIL HDPE.
NOTES:

1. PRESSURE REDUCING BACKFLOW PREVENTER VALVES SHALL BE LISTED ON THE STATE OF CALIFORNIA'S DEPARTMENT OF HEALTH SERVICES MOST RECENT LIST OF APPROVED REDUCED PRESSURE BACKFLOW PREVENTERS.

2. INSTALL LOCATING WIRE PER DRAWING 8-4.

3. ALL PIPE SHALL BE CEMENT LINED DUCTILE IRON, CLASS 350 MEETING THE REQUIREMENTS OF AWWA C151 AND C115 ALL JOINTS SHALL BE FLANGED. FLANGES SHALL CONFORM TO AWWA C207, CLASS D REQUIREMENTS.

4. BURIED PIPE SHALL BE WRAPPED WITH 8 MILS OF POLYETHYLENE ENCASEMENT WITH SAND BEDDING AND BACKFILL.

5. PRESSURE REDUCING BACKFLOW PREVENTER, REFER TO SECTION 8-16 FOR TESTING AND CERTIFICATION REQUIREMENTS.

6. FLANGED VALVE.

7. PIPE SUPPORT, 2" GALVANIZED SCHEDULE 40 MINIMUM.

8. 4" CONCRETE SLAB — 24" WIDE WITH VARYING LENGTH.

9. 6" OF CRUSHED AGGREGATE COMPACTED TO 95% COMPACTION.

10. THRUST BLOCK WITH #5 REBARS. WRAP THE PORTION OF THE REBAR THAT IS NOT EMBEDDED IN THE CONCRETE WITH 20 MIL POLYETHYLENE TAPE. SEE DRAWING 8-3 FOR SIZING.

11. PROVIDE LOCKABLE PROTECTIVE ENCLOSURE AND INSULATED BLANKET FOR PRESSURE REDUCING BACKFLOW ASSEMBLY.

COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT

PRESSURE REDUCING-BACKFLOW PREVENTER 4" AND LARGER

DATE: 08/05/08
SHEET #: 2 OF 2
DRAWING #: 8-8
NOT TO SCALE

COUNTY ENGINEER No. C42401
APPROVAL DATE
Do = AVERAGE OUTSIDE PIPE DIAMETER (INCHES)
A = OFFSET AT THE END OF PIPE (INCHES)
Rb = MINIMUM BENDING RADIUS (FEET)

MAX. DEFLECTION FOR PVC PIPE,
AWWA C900 CLASS 200

<table>
<thead>
<tr>
<th>Normal Pipe Diameter</th>
<th>Average Outside Pipe Diameter, Do</th>
<th>Minimum Wall Thickness</th>
<th>Minimum Bending Radius, Rb</th>
</tr>
</thead>
<tbody>
<tr>
<td>(inches)</td>
<td>(inches)</td>
<td>(inches)</td>
<td>(feet)</td>
</tr>
<tr>
<td>6</td>
<td>6.900</td>
<td>0.493</td>
<td>204</td>
</tr>
<tr>
<td>8</td>
<td>9.050</td>
<td>0.646</td>
<td>266</td>
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<tr>
<td>10</td>
<td>11.100</td>
<td>0.793</td>
<td>329</td>
</tr>
<tr>
<td>12</td>
<td>13.200</td>
<td>0.943</td>
<td>385</td>
</tr>
</tbody>
</table>

NOTE:
1. JOINT DEFLECTION OF AWWA C900 PVC PIPE IS PROHIBITED.
NOTES:
A. IF DIP IS USED, FITTINGS MAY HAVE BELL ENDS WITH U.S. PIPE FIELD LOK GASKETS FOR RESTRAINING DEVICES OR APPROVED EQUIVALENT. BELL RESTRAINTS FOR PVC PIPE ARE NOT ALLOWED.
B. IF BEND IS TO EXCEED 22.5 DEGREES, THE BEND AND THE RESTRAIN LENGTH MUST BE APPROVED BY THE COUNTY.
C. WRAP ALL DIP AND FITTINGS WITH 8 MIL POLYETHYlene ENCASEMENT IN ACCORDANCE WITH AWWA C105.
D. RESTRAINING DEVICE FOR DIP; FOR POJ, USE U.S. PIPE FIELD LOK GASKETS OR APPROVED EQUIVALENT, FOR MJ JOINTS USE STAR PIPE PRODUCTS STARGRIP 3000, STAR PIPE PRODUCTS ALLGRIP 3600, EBAA MEGALUG 2000PV SERIES, OR APPROVED EQUIVALENT.
E. RESTRAINING DEVICE FOR PVC PIPE; USE MJ FITTINGS WITH STAR PIPE PRODUCTS ALLGRIP 3600, EBAA MEGALUG 2000PV SERIES, OR APPROVED EQUIVALENT.
F. SEE PLAN AND PROFILE FOR RESTRAINED LENGTH AND DEGREE OF BEND.
G. THIS DETAIL IS FOR WATER PIPES 12” IN DIAMETER AND SMALLER.
NOTES:

1. AN 8 FOOT MINIMUM LENGTH OF WATER MAIN SHALL EXTEND OVER A SANITARY SEWER OR STORM DRAIN PIPE. THE WATER MAIN SHALL EXTEND 3 FEET BEYOND THE OUTSIDE DIMENSION OF ALL OTHER UTILITIES, OR AS REQUIRED BY THE CALIFORNIA DEPARTMENT OF HEALTH.

2. USE 1/2" CRUSHED AGGREGATE FOR PVC WATER PIPE. USE SAND FOR DUCTILE IRON WATER PIPE. COMPACT BEDDING AND BACKFILL MATERIAL TO 90% RELATIVE COMPACTION.
NOTE:
Backfill with Native Material and Compact to 90% Compaction. In traffic areas the backfill and compaction requirements for the road shall govern.

COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT

2" TEMPORARY BLOW OFF ASSEMBLY

DATE: 08/05/08
SHEET #: 1 or 1
DRAWING #: 8-12
NOT TO SCALE
G5 CHRISTY BOX AND LID OR APPROVED EQUIVALENT PER DRAWING 8-5

36" MIN. PVC C900 DR18 RISER

4" FL X FL GATE VALVE

LOCATING WIRE PER 8-4

GALVANIZED STEEL CAP WITH 1" SQUARE Recessed Plug
PIE Pipe THREADS TO MEET NPT STANDARD

G12 CHRISTY BOX AND LID OR APPROVED EQUIVALENT

1. WRAP 4" GATE VALVE AND ALL METAL FITTINGS AND PIPE WITH 8 MIL POLYETHYLENE ENCASMENT PER AWWA C105.
2. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 PSI AND MEET AWWA C110 OR AWWA C153 STANDARDS.
3. PROVIDE 6 INCHES OF SAND BEDDING AND BACKFILL WITH SAND TO 6 INCHES ABOVE THE TOP OF PIPE AND FITTINGS. COMPACT TO 90% RELATIVE COMPACTION.
4. GALVANIZED STEEL PIPE NOT ALLOWED.
5. THESE JOINTS MUST BE RESTRAINED. TYPES OF RESTRAINED JOINTS MAY BE: (1) FLANGE, (2) MJ WITH APPROVED Restraining DEVICES (EBAA OR STAR PIPE PRODUCTS), OR (3) FOR D.I.P., PUSH ON JOINTS WITH U.S. PIPE FIELD-LOK GASKET OR APPROVED EQUIVALENT.

CONCRETE BLOCKS FOR LEVELING IF NEEDED
STEEL COMPANION FLANGE
INSULATING GAStK
DUCTILE IRON PIPE, VARY LENGTH TO FIT GRADE REQUIREMENT
THRUST BLOCK WITH 4 SQUARE FEET OF BEARING AREA AGAINST UNDISTURBED SOIL.

NOTES:

COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT

4" BLOW OFF ASSEMBLY AT END OF MAIN

DATE: 08/05/08
SHEET #: 1 OF 1
DRAWING #: 8-13
NOT TO SCALE
3/16" steel, 6" x 6" rectangular tube 18" high with an 8-1/2" cap, spot welded at the top. Clean interior and exterior of steel with a water based cleaner. Devprep 88 or equivalent. Factory apply 1 coat, at 2.0 mils, of Tnemec series 135 epoxy primer, then 1 coat, at 2.0 mils of Tnemec series 28 acrylic to the cap, tube, and top of the lid of the utility box. Color to be Hunter Green or approved equivalent.

2-3/8" Bolts, Grade 3 with washer

1/4" thick steel lid. Tack Weld 1/4" thick by 1" wide steel plate around perimeter of lid so top of lid is flush with top of box. Cut 5" x 5" square hole in top of lid. Square hole to be centered relative to width of lid. Lid and tube assembly shall be PWAE118M or approved equivalent. Lid shall be bolted to box.

Weld 2 locking nuts to lid to accept bolts.

1" schedule 40 Galvanized steel pipe with steel threaded coupling and 1" to 3/4" PVC adapter. Operator must be able to unscrew PVC Riser from coupling.

1" Crispin UL-10 Combination Air Release/ Vacuum Valve or Approved Equivalent

1"-90° bronze fitting (Typ)
1"-bronze nipple (Typ)
1 1/4" x 1" Bronze threaded union

Copper pipe (0.182" wall thickness) per AWWA C800 with plastic encapsment; maintain upward grade from corporation stop to Air/ Vacuum Combination valve

NOTES:
1. Maintain a grade upward from corp. stop to air valve.
2. Flare or solder joint fittings and compression fittings are acceptable.
3. Provide 3' x 3' x 3' of 1/2" crushed aggregate for drainage and support under valve, compact to 95%.
4. Detail not for use in roadways.

COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT

COMBINATION AIR/VACUUM VALVE

DATE: 08/05/08

SHEET # 1 OF 1

DRAWING #: 8-14

NOT TO SCALE
1. TEE AND MJ X FLANGE ADAPTER SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE ENCASEMENT.
2. DIG SUMP UNDER CUT IN LOCATION AND PUMP ALL WATER FROM EXISTING MAIN AWAY FROM CUT IN LOCATION. DO NOT ALLOW ANY WATER TO ENTER EXISTING PIPE. ADHERE CHLORINE TABLETS TO TEE OR CROSS, THE NUMBER OF TABLETS SHALL BE IN ACCORDANCE OF THE COUNTY STANDARDS. SPRAY EXISTING PIPE, ALL FITTINGS AND VALVES WITH A SOLUTION OF SUPER CHLORINATED WATER JUST PRIOR TO INSTALLATION.
3. PROVIDE RESTRAINT OF PIPE JOINT AS REQUIRED BY PLANS AND DRAWING 8-3 SHEET 1.

FOR TEE INSTALL THRUST BLOCK SIZE PER DRAWING 8-3 SHEET 1. FOR CROSS PROVIDE PIPE RESTRAINT AS REQUIRED PER PLANS.

EXISTING WATER MAIN

MJ X FLANGE ADAPTER

EXISTING WATER MAIN

MJ X FLANGE ADAPTER

WATER VALVE

PROPOSED WATER MAIN

SEE DWG 8-5 FOR TYPICAL VALVE INSTALLATION, INSTALL VALVES AT LOCATIONS SHOWN ON PLAN AND PROFILE SHEETS OF PLAN SET.

COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT

CUT IN

DATE: 08/05/08

SHEET # 1 OF 1

DRAWING #: 8-15
NOT TO SCALE
NOTES:

1. 12" x 18" ALUMINUM STEEL ALLOY 6061-T6 0.080" GAUGE, ROUNDED CORNERS (1" RADIUS).
2. LETTER HEIGHT AND SYMBOL SIZE SHALL BE PROPORTIONAL TO SIGN SIZE.
3. LETTER AND SYMBOL SHALL BE WHITE IN COLOR. THE BACKGROUND SHALL BE PURPLE (PANTONE 241) IN COLOR.
4. 4"x4" POST SHALL BE TREATED DOUGLAS FIR (STATE OF CALIFORNIA SPECIFICATION NO. 56-2.02B).
5. FOOTING SHALL BE 24" IN DEPTH WITH COMPACTED EARTH IN 4" LIFTS OR CONCRETE.
6. 5/16"Ø x 4-1/2" ZINC PLATED STEEL BOLT WITH VANDAL PROOF NUTS.
7. ALL SIGNS SHALL CONFORM TO THE STANDARD SPECIFICATIONS. A DIRECT OR PRESSURE SENSITIVE DECAL INK SCREENING PROCESS REQUIRED.
8. 3" x 4-1/2" PRESSURE SENSITIVE DECALS ARE REQUIRED FOR IRRIGATION CONTROLLERS AND OTHER ABOVE GROUND FACILITIES REQUIRING A WARNING SIGN. WHEN CONDITIONS AND/OR FACILITY CHARACTERISTICS RENDER THESE SPECIFICATIONS INAPPROPRIATE, ALTERNATIVE SIGNING MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE COUNTY ENGINEER.