

SECTION 6
STANDARD DRAWINGS
JUNE 2011

INDEX

1  1" COMBINATION AIR VALVE ASSEMBLY
1.A  1" MODIFIED COMBINATION AIR VALVE ASSEMBLY
1A  2" COMBINATION AIR VALVE ASSEMBLY
1A.A  2" MODIFIED COMBINATION AIR VALVE ASSEMBLY
2  4" x 2 1/2" BLOW-OFF ASSEMBLY
3  3/4" MANUAL AIR RELEASE ASSEMBLY
3.A  2" MANUAL AIR RELEASE ASSEMBLY
4  BACKFLOW PREVENTION DEVICE INSTALLATION
5  DIELECTRIC CONNECTION TO STEEL MAIN
6  Reclaimed Water Trench
7  WATER MAIN SEPARATION
8  6" x 4" x 2 1/2" FIRE HYDRANT ASSEMBLY
9  Backflow Prevention Installation
10  VALVE STEM EXTENSION
11  VALVE CAN ASSEMBLY
12  SLOPED TRENCH EROSION CONTROL
13  THRUST BLOCKS
14  ANCHOR BLOCKS
15  SLOPED PIPE ANCHOR BLOCKS
16  3/4" WATER SERVICE ASSEMBLY
16.A  1" WATER SERVICE ASSEMBLY
16.R  1" WATER SERVICE ASSEMBLY (FOR RESIDENTIAL ONLY)
17  DIRECT TAP FOR DUCTILE IRON PIPE
18  1 1/2" WATER SERVICE ASSEMBLY
18.R  1 1/2" WATER SERVICE ASSEMBLY (FOR RESIDENTIAL ONLY)
18.A  2" WATER SERVICE ASSEMBLY
19  LARGE METER ASSEMBLY (4", 6" & 8")
20  Detector Check Vault Assembly
20A  FIRE SERVICE ASSEMBLY (6", 8" & 10") WITH DOUBLE DETECTOR CHECK ASSEMBLY
20B  ALTERNATE FIRE SERVICE ASSEMBLY (6", 8" & 10") WITH COMPACT DOUBLE DETECTOR CHECK ASSEMBLY
21  ADJUSTABLE PIPE SUPPORT
22  RUBBER GASKET BELL-AND-SPIGOT JOINT WITH BOND CLIP
23  BUTT STRAP ENCLOSURE
24  RUBBER GASKET BELL-AND-SPIGOT JOINT WITH GAP ROD WELD JOINT DETAIL
25  Location of Aboveground Utilities (City of West Covina)
26  TYPICAL WATER FACILITY LAYOUT
27  GUARD POST DETAILS
28  PIPE ZONE TRENCH BACKFILL & LINE CHLORINATION
29  Recommended Trench Shoring
30  Temporary Trench Line Erosion Control
PIPE CRADLE AND HANGER ASSEMBLY

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN CITY OF WEST COVINA

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN CITY OF DIAMOND BAR

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN CITY OF WALNUT

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN CITY OF INDUSTRY

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN UNINCORPORATED LOS ANGELES COUNTY

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN CITY OF POMONA

1" SAMPLING STATION ASSEMBLY

Revisions:

- Standard Drawings No. 16.R & 18.R added. 01/31/11
- Plastic combination air valve from A.R.I. replaced metal combination air/vac. 06/14/11
- Cover & reading lid replaced solid cover for Std. Drawings 3, 3.A, 20A & 20B. 06/14/11
NOTES:
1. ITEM No. 12 SHALL BE FURNISHED AND INSTALLED BY INSTALLATION CONTRACTOR.
2. FOR RECYCLED WATER SYSTEM, THE AIRVAC. HOUSING SHALL BE MANUFACTURED WITH A PURPLE STRIP.
3. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
4. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING No. 5.
5. FOR DIRECT TAP, SEE STANDARD DRAWING No. 17.
6. WHERE STREET DOES NOT HAVE NORMAL CURB, INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL GUARD POST PER STD. DWG. No. 27.
7. SaDdLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.
8. 12" AND SMALLER SADDLE SHALL BE SINGLE STRAP, LARGER THAN 12" SHALL BE DOUBLE STRAP.
9. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUAN</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>BRONZE SERVICE SADDLE WITH 1&quot; TAP</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1&quot; BRONZE CORPORATION STOP, M.I.P. x FLARE</td>
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<tr>
<td>3</td>
<td>1</td>
<td>1&quot;-90° COPPER BEND, F.C.T x FLARE</td>
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<tr>
<td>4</td>
<td>1</td>
<td>1&quot; COPPER TUBING, TYPE K SOFT</td>
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<tr>
<td>5</td>
<td>1</td>
<td>1&quot;-45° COPPER BEND, F.I.P. x FLARE</td>
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<tr>
<td>6</td>
<td>1</td>
<td>1&quot; x 18&quot; BRASS NIPPLE</td>
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<tr>
<td>7</td>
<td>1</td>
<td>1&quot; BRONZE GATE VALVE</td>
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<tr>
<td>8</td>
<td>1</td>
<td>1&quot; COMBINATION AIR VALVE W/ 1&quot; MALE NPT INLET, STD. 3-250 psi (ARI D-40-PO1W-S)</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>20&quot; DIA. x 20&quot;H AIR &amp; VACUUM VALVE HOUSING WITH SANDSTONE FINISH (ARMORCAST P6002002-SND)</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>1/2&quot; DIA. x 3-3/4&quot; ZINC PLATED WEDGE TYPE EXPANSION ANCHOR (RED HEAD TRUBOLT)</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>6&quot; x 32&quot; x 32&quot; CONCRETE BASE PAD, POUR IN PLACE</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>ZINC ANODE</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>4&quot; DIA. P.V.C. PIPE, 8&quot; LONG</td>
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WALNUT VALLEY WATER DISTRICT

1" COMBINATION AIR VALVE ASSEMBLY

REVISIONS

08/14/11

02/05/10
1. ITEM No. 12 SHALL BE FURNISHED AND INSTALLED BY INSTALLATION CONTRACTOR.

2. FOR RECYCLED WATER SYSTEM, THE AIRVAC HOUSING SHALL BE MANUFACTURED WITH A PURPLE STRIP.

3. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.

4. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING No. 5.

5. FOR DIRECT TAP, SEE STANDARD DRAWING No. 17.

6. WHERE STREET DOES NOT HAVE NORMAL CURB, INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL GUARD POST PER STD. DWG. No. 27.

7. SADDLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.

8. 12" AND SMALLER SADDLE SHALL BE SINGLE STRAP, LARGER THAN 12" SHALL BE DOUBLE STRAP.

9. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

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<td>BRONZE SERVICE SADDLE WITH 1&quot; TAP</td>
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<tr>
<td>2</td>
<td>1</td>
<td>1&quot; BRONZE CORPORATION STOP, M.I.P. x FLARE</td>
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<tr>
<td>3</td>
<td>1</td>
<td>1&quot;-90° COPPER BEND, F.C.T x FLARE</td>
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<tr>
<td>4</td>
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<td>1&quot; BRONZE GATE VALVE</td>
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<td>10</td>
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<td>1/2&quot; DIA. x 3-3/4&quot; ZINC PLATED WEDGE TYPE EXPANSION ANCHOR (RED HEAD TRUBOLT)</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>8&quot; x 32&quot; CONCRETE BASE PAD, POUR IN PLACE</td>
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<tr>
<td>12</td>
<td>1</td>
<td>ZINC ANODE</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>BALL VALVE CURB STOP, FLARE x FLARE</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>4&quot; P.V.C. PIPE, 6&quot; LONG</td>
</tr>
</tbody>
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WALNUT VALLEY WATER DISTRICT

1" MODIFIED COMBINATION AIR VALVE ASSEMBLY

APPROVED BY: [Signature]

DRAWN BY: TD/ML

DATE: 02/05/10

STANDARD DRAWING No. 1.1
EXISTING OR FUTURE CURB & GUTTER IMPROVEMENTS

NOTES:
1. ITEM No. 13 SHALL BE FURNISHED AND INSTALLED BY INSTALLATION CONTRACTOR.
2. FOR RECYCLED WATER SYSTEM, THE AIRVAC HOUSING SHALL BE MANUFACTURED WITH A PURPLE STRIP.
3. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
4. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING No. 5.
5. FOR DIRECT TAP, SEE STANDARD DRAWING No. 17.
6. WHERE STREET DOES NOT HAVE NORMAL CURB, INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL GUARD POST PER STD. DWG. No. 27.
7. SADDLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.
8. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

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<tr>
<td>1</td>
<td>1</td>
<td>BRONZE SERVICE SADDLE WITH 2&quot; TAP</td>
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<tr>
<td>2</td>
<td>1</td>
<td>2&quot; BRONZE CORPORATION STOP, M.I.P. x FLARE</td>
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<tr>
<td>3</td>
<td>1</td>
<td>2&quot;-90° COPPER BEND, F.C.T x FLARE</td>
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<tr>
<td>4</td>
<td>1</td>
<td>2&quot; COPPER TUBING, TYPE K SOFT</td>
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<tr>
<td>5</td>
<td>1</td>
<td>2&quot; COUPLING, M.I.P. x FLARE</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2&quot;-45° COPPER BEND, F.I.P. x F.I.P.</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>2&quot; x 18&quot; BRASS NIPPLE</td>
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<tr>
<td>8</td>
<td>1</td>
<td>2&quot; BRONZE GATE VALVE</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>2&quot; COMBINATION AIR VALVE W/ 2&quot; MALE NPT INLET, STD. 3-250 psi (ARI D-40-PO2W-S)</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>24&quot; DIA. x 24&quot;H AIR &amp; VACUUM VALVE HOUSING WITH SANDSTONE FINISH (ARMORCAST P60020001-SND)</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>1/2&quot; DIA. x 3-3/4&quot; ZINC PLATED WEDGE TYPE EXPANSION ANCHOR (RED HEAD TRUBOLT)</td>
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<td>-</td>
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<td>1</td>
<td>ZINC ANODE</td>
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<tr>
<td>14</td>
<td>1</td>
<td>4&quot; DIA. P.V.C. PIPE, 8&quot; LONG</td>
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</tbody>
</table>

WALNUT VALLEY WATER DISTRICT

REVISIONS
06/14/11 TD

Erik J. Hitchman
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. C49185
Exp. 02/30/2010

2" COMBINATION AIR VALVE ASSEMBLY

STANDARD DRAWING No.
02/05/10
NOTES:
1. ITEM No. 13 SHALL BE FURNISHED AND INSTALLED BY INSTALLATION CONTRACTOR.
2. FOR RECYCLED WATER SYSTEM, THE AIR/VAC. HOUSING SHALL BE MANUFACTURED WITH A PURPLE STRIP.
3. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
4. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING No. 5.
5. FOR DIRECT TAP, SEE STANDARD DRAWING No. 17.
6. WHERE STREET DOES NOT HAVE NORMAL CURB, INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL GUARD POST PER STD. DWG. No. 27.
7. SADDLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.
8. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

**REVISIONS**

<table>
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<tr>
<th>Date</th>
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<tr>
<td>06/14/11</td>
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**WALNUT VALLEY WATER DISTRICT**

**2" MODIFIED COMBINATION AIR VALVE ASSEMBLY**

**APPROVED BY:**

**TD/ML**

**DATE:** 02/05/10
NOTES:
1. ITEMS No. 6, 7 & 8 TO BE GIVEN TWO (2) COATS OF RED PRIMER AND TWO (2) COATS OF "HI-VIS YELLOW" FOR DOMESTIC WATER SYSTEM OR PURPLE FOR RECYCLED WATER SYSTEM FOR OUTSIDE ONLY - PAINT SHALL BE FURNISHED BY THE DISTRICT.
2. WHERE STREET DOES NOT HAVE NORMAL CURB, INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL GUARD POST PER STD. DWG. No. 27.
3. FOR RECYCLED WATER SYSTEM, PIPE SHALL BE PURPLE P.V.C. C900. IF DUCTILE-IRON IS USED, WRAP PIPE W/PURPLE POLYETHYLENE ENCASEMENT. IF STEEL PIPE IS USED, INSTALLATION CONTRACTOR SHALL INSTALL DISTRICT’S FURNISHED RECYCLED WARNING TAPE - TAPE SHALL BE FURNISHED BY THE DISTRICT.
4. ALL EXPOSED BURIED METAL SHALL BE COATED WITH "METAL GUARD 301" CORROSION PROTECTION GREASE. GREASE SHALL BE FURNISHED BY THE CONTRACTOR.
5. ALL PIPE, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

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<tbody>
<tr>
<td>1</td>
<td>6&quot; PIPE (DUCTILE-IRON OR STEEL M.L.&amp;C. PIPE)</td>
<td></td>
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<tr>
<td>2</td>
<td>6&quot; GATE VALVE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>6&quot; x 42&quot; D.I.C.L. BURY WITH 6&quot; TY INLET AND 6&quot; 6-HOLE FLANGED OUTLET</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6&quot; FLANGED SPOOL, FLAT-FACE 150# WITH 6 HOLES</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>SET OF HOLLOW BREAK-OFF NUTS AND BOLTS AND FULL-FACE NON-ASBESTOS GASKET WITH 6 HOLES</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6&quot; x 4&quot; C.I. COMPANION FLANGE WITH 6 HOLES</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>4&quot; x 18&quot; SCH. 40 GALV. NIPPLE, T.B.E.</td>
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<tr>
<td>8</td>
<td>ANGLE FIRE PLUG VALVE WITH 4&quot; L.P.T. x 2 1/2&quot; N.H.T.</td>
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<td>9</td>
<td>VALVE CAN ASSEMBLY (STD. DWG. No. 11)</td>
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<tr>
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<td>SET OF NUTS, BOLTS, AND FULL FACE NON-ASBESTOS GASKET FOR 6-HOLE FLANGE</td>
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<tr>
<td>11</td>
<td>THRUST BLOCK (STD. DWG. No. 13)</td>
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WALNUT VALLEY WATER DISTRICT

4" x 2 1/2" BLOW-OFF ASSEMBLY
NOTES:
1. FOR RECYCLED WATER SYSTEM, POLYMER CONCRETE METER BOX COVER AND READING LID SHALL BE PAINTED PURPLE AND MARKED "RECYCLED WATER".
2. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
3. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING No. 5.
4. FOR DIRECT TAP, SEE STANDARD DRAWING No. 17.
5. 1/2" AND SMALLER SADDLE SHALL BE SINGLE STRAP, LARGER THAN 1/2" SHALL BE DOUBLE STRAP.
6. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

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<tr>
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<td>1</td>
<td>BRONZE SERVICE SADDLE WITH 3/4&quot; TAP</td>
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<tr>
<td>2</td>
<td>1</td>
<td>3/4&quot; BRONZE CORPORATION STOP, M.I.P. x FLARE</td>
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<tr>
<td>3</td>
<td>1</td>
<td>3/4&quot; 90° COPPER BEND, F.C.T. x FLARE</td>
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<tr>
<td>4</td>
<td>-</td>
<td>3/4&quot; COPPER TUBING, TYPE K SOFT</td>
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<td>5</td>
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<td>3/4&quot; BRONZE ANGLE METER STOP WITH LOCKWING</td>
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<tr>
<td>6</td>
<td>1</td>
<td>13&quot; x 24&quot; x 12&quot; POLYMER CONC. METER BOX (ARMORCAST A5001946PCX12)</td>
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<td>13&quot; x 24&quot; POLYMER CONC. COVER (ARMORCAST A6001866DQ)</td>
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<td>5&quot; x 7&quot; POLYMER CONC. READING LID MARKED &quot;WATER&quot; (ARMORCAST A6000467)</td>
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<tr>
<td>7</td>
<td>1</td>
<td>ZINC ANODE</td>
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WALNUT VALLEY WATER DISTRICT

3/4" MANUAL AIR RELEASE ASSEMBLY
EXISTING OR FUTURE CURB & GUTTER IMPROVEMENTS

18"

2% SLOPE FIN. SURFACE

1" PER 1'-0"

PIECE

NOTES:
1. FOR RECYCLED WATER SYSTEM, POLYMER CONCRETE METER COVER AND READING LID SHALL BE PAINTED PURPLE AND MARKED "RECYCLED WATER".
2. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALLWRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
3. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING NO. 5.
4. FOR DIRECT TAP, SEE STANDARD DRAWING NO. 17.
5. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

ITEM | QUAN. | DESCRIPTION
--- | --- | ---
1 | 1 | BRONZE SERVICE SADDLE WITH 2" TAP
2 | 1 | 2" BRONZE CORPORATION STOP, M.I.P. x FLARE
3 | 1 | 2" 90° COPPER BEND, F.C.T. x FLARE
4 | - | 2" COPPER TUBING, TYPE K SOFT
5 | 1 | 2" BRONZE ANGLE METER STOP WITH LOCKING
6 | 1 | 17" x 30" x 12" POLYMER CONC. METER BOX (ARMORCAST A6001640PCX12)
6 | 1 | 17" x 30" x 12" POLYMER CONC. COVER (ARMORCAST A6001643DZ)
6 | 1 | 9" x 14" POLYMER CONC. READING LID MARKED "WATER" (ARMORCAST A6000482)
7 | 1 | ZINC ANODE

WALNUT VALLEY WATER DISTRICT

2" MANUAL AIR RELEASE ASSEMBLY

REVISIONS
06/14/11 TD

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

CIVIL

STANDARD DRAWING No. 3.A

DATE: 02/05/10
GENERAL PROVISIONS:
1. ALL COMMERCIAL, INDUSTRIAL, INSTITUTIONAL METERED SERVICES AND RESIDENTIAL FIRE METERED SERVICE SHALL BE PROTECTED BY A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE (R.P. DEVICE). R.P. DEVICE MUST BE INSTALLED BEFORE SERVICE IS TURNED ON.
2. R.P. DEVICES MUST BE PLACED ON PRIVATE PROPERTY AS CLOSE AS PRACTICAL TO THE METERED SERVICE.
3. NO BRANCHES (i.e., TEES, CROSSES, ETC.) SHALL BE ALLOWED BETWEEN THE R.P. DEVICE AND THE METER.
4. R.P. DEVICE MUST BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, UNIVERSITY OF SOUTHERN CALIFORNIA.
5. R.P. DEVICE MUST BE THE SAME SIZE AS THE SERVICE LINE, UNLESS APPROVED BY WALNUT VALLEY WATER DISTRICT.
6. R.P. DEVICE MUST BE INSTALLED ABOVE GROUND PREFERABLY IN A LANDSCAPE AREA WITH TWELVE INCHES (12") MINIMUM TO THIRTY (30") MAXIMUM VERTICAL CLEARANCE FROM GRADE.
7. ONLY ONE R.P. DEVICE WILL BE ALLOWED PER METER TO SERVE AS METER PROTECTION, UNLESS APPROVED BY WALNUT VALLEY WATER DISTRICT.
8. METER PROTECTION DEVICE MUST BE INSPECTED AND TESTED ANNUALLY BY A LICENSED, LOS ANGELES COUNTY HEALTH DEPARTMENT CERTIFIED BACKFLOW DEVICE TESTER, AND RESULTS SUBMITTED TO THE WALNUT VALLEY WATER DISTRICT.
9. FAILURE TO PROPERLY INSTALL AND MAINTAIN METER PROTECTION MAY RESULT IN TERMINATION OF WATER SERVICE.
10. A LIST OF APPROVED BACKFLOW DEVICES IS AVAILABLE AT THE WALNUT VALLEY WATER DISTRICT OFFICE.
11. R.P. DEVICE ARE NOT ALLOWED ON RECYCLED WATER SYSTEM.

WALNUT VALLEY WATER DISTRICT

BACKFLOW PREVENTION DEVICE INSTALLATION

REVISIONS

STANDARD DRAWING No. 4

DATE: 02/05/10
NOTES:
1. DIELECTRIC CONNECTIONS SHALL BE REQUIRED ON ALL ASSEMBLIES WHERE COPPER OR BRASS IS TIED TO STEEL PIPE.
2. FOR WRAPPING, USE DOUBLE WRAP OF 10 MIL, PRESSURE SENSITIVE TAPE OR SINGLE WRAP OF 20 MIL TAPE. WRAP CORP. STOP IN OPEN POSITION UNLESS OTHERWISE DIRECTED.
3. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUAN.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>EXTRA HEAVY BLACK IRON PIPE COUPLING, WELD TO STEEL PIPE</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>BRONZE CORPORATION STOP, M.I.P. x FLARE</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>COPPER TUBING, TYPE K SOFT</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>PRESSURE SENTATIVE TAPE</td>
</tr>
</tbody>
</table>

WALNUT VALLEY WATER DISTRICT

DIELECTRIC CONNECTION TO STEEL MAIN

APPROVED BY: 

DRAWN BY: TD/ML
PARALLEL CONSTRUCTION

LEGENDS:
Pipe* - pipeline conveying:
- untreated or treated sewage
- disinfected secondary 2.0 or 23 recycled water
- hazardous fluids such as fuels, industrial wastes & wastewater sludge

Pipe - pipeline conveying:
- disinfected tertiary recycled water
- storm drainage

WATER MAINS AND SUPPLY LINES SHALL BE INSTALLED:
(A) AT LEAST 10 FEET HORIZONTALLY FROM AND 1 FOOT ABOVE ANY PARALLEL SEWER LINES, DISINFECTED SECONDARY RECYCLED WATER LINES, OR HAZARDOUS FLUID LINES.
(B) AT LEAST 4 FEET HORIZONTALLY FROM AND 1 FOOT ABOVE ANY PARALLEL DISINFECTED TERTIARY RECYCLED WATER LINES AND STORM DRAINAGE LINES.

CROSSING CONSTRUCTION

IF CROSSING A PIPELINE CONVEYING FLUIDS MENTIONED ABOVE, WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES AND AT LEAST 1 FOOT ABOVE THAT PIPELINE. NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN 8 FEET HORIZONTALLY OF THE FLUID PIPELINE.

GENERAL NOTES

1. WATER MAINS AND SUPPLY LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH AS SEWER LINES, DISINFECTED SECONDARY 2.0 OR 23 RECYCLED WATER LINES, HAZARDOUS FLUID LINES, OR STORM DRAINAGE LINES.
2. THE VERTICAL SEPARATION SPECIFIED ABOVE IS REQUIRED ONLY WHEN THE HORIZONTAL DISTANCE BETWEEN A WATER MAIN AND FLUID PIPELINE IS LESS THAN 10 FEET.
3. THE MINIMUM SEPARATION DISTANCES SET FORTH SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH PIPE BARREL.
4. THE "CALIFORNIA WATERWORKS STANDARDS" SETS FORTH THE MINIMUM SEPARATION REQUIREMENTS FOR WATER MAINS AND SEWER LINES. THESE STANDARDS ARE CONTAINED IN SECTION 64572, TITLE 22, CALIFORNIA CODE OF REGULATIONS.
5. WITH CPPH APPROVAL, NEWLY INSTALLED WATER MAINS MAY BE EXEMPT FROM THE SEPARATION DISTANCES IF THE NEWLY INSTALLED MAIN IS:
   (1) LESS THAN 1,320 LINEAR FEET,
   (2) REPLACING EXIST. MAINS, INSTALLED IN THE SAME LOCATION, AND HAS A DIAMETER NO GREATER THAN 6 INCHES MORE THAN THE DIAMETER IT IS REPLACING, AND
   (3) INSTALLED IN A MANNER THAT MINIMIZES THE POTENTIAL FOR CONTAMINATION, INCLUDING, BUT NOT LIMITED TO:
   (A) SLEEving THE NEWLY INSTALLED MAIN, OR
   (B) UTILIZING UPGRADED PIPING MATERIAL.

WALNUT VALLEY WATER DISTRICT

WATER MAIN SEPARATION

APPROVED BY: [Signature]
DRAWN BY: [Signature]

DATE: 02/05/10
NOTES:
1. STEEL COVER TO BE GIVEN TWO (2) PRIME COATS OF RED PRIMER AND TWO (2) COATS OF "HI-VIS YELLOW" FOR OUTSIDE ONLY- PAINT SHALL BE FURNISHED BY THE DISTRICT.
2. WHERE STREET DOES NOT HAVE NORMAL CURB, INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL GUARD POST PER STD. DWG. NO. 27.
3. ALL EXPOSED BURIED METAL SHALL BE COATED WITH "METAL GUARD 301" CORROSION PROTECTION GREASE. GREASE SHALL BE FURNISHED BY THE CONTRACTOR.
4. ALL PIPE, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUAN.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>6&quot; FLANGED OUTLET</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>6&quot; GATE VALVE</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>6&quot; PIPE (DUCTILE-IRON OR STEEL M.L.&amp;C. PIPE)</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>6&quot; x 42&quot; D.I.C.L. BURY WITH 6&quot; TY INLET AND 6&quot; 6-HOLE FLANGED OUTLET</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>6&quot; FLANGED SPOOL, FLAT-FACE 150# WITH 6 HOLES</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>SET OF HOLLOW BREAK-OFF NUTS AND BOLTS AND FULL-FACE NON-ASBESTOS GASKET WITH 6 HOLES</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>FIRE HYDRANT, 6&quot;-8 HOLE FLANGED INLET WITH ONE 4&quot; STEAMER HOSE AND ONE 2 1/2&quot; FIRE HOSE OUTLET, COMPLETE WITH PLASTIC CAPS AND GALV. CHAINS</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>6&quot; VALVE CAN ASSEMBLY (STD. DWG. No. 11)</td>
</tr>
<tr>
<td>9</td>
<td>-</td>
<td>SET OF NUTS, BOLTS, AND FULL-FACE NON-ASBESTOS GASKET</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>SET OF NUTS, BOLTS, AND FULL-FACE NON-ASBESTOS GASKET FOR 6-HOLE FLANGE</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>THRUST BLOCK (STD. DWG. No. 13)</td>
</tr>
</tbody>
</table>

WALNUT VALLEY WATER DISTRICT

6" x 4" x 2 1/2" FIRE HYDRANT ASSEMBLY

APPROVED BY: [Signature]
DRAWN BY: TD/ML

REVISIONS

Erik J. Hitchman
Registered Professional Engineer
STATE OF CALIFORNIA
No. C49185
Exp. 02/30/2010
NOTES:
1. PROVIDE EXTENSION WHEN DEPTH TO OPERATING NUT EXCEEDS TEN FEET (10'). FABRICATE EXTENSION TO FIELD MEASUREMENTS. PROVIDE ADDITIONAL SPACER PLATE WHEN EXTENSION EXCEEDS THIRTY-SIX INCHES (36') IN LENGTH. THE EXTENSION SHALL BE OF SOLID DESIGN, PINNED COUPLERS ARE UNACCEPTABLE. GALVANIZE THE EXTENSION AFTER FABRICATION.
2. TERMINATE EXTENSION BETWEEN TWENTY-FOUR INCHES (24") AND THIRTY-SIX INCHES (36") FROM FINISHED GRADE.
FINISHED GRADE

MEDIUM SKIRT COVER

18" SQUARE

4" MIN.

P.C.C. VALVE CAN PAD

FOR UNPAVED AREAS
N.T.S.

FINISHED GRADE

MEDIUM SKIRT COVER

A.C. PAVING

BASE

20 Ga. GALVANIZED ADJUSTABLE
TOP SECTION, SPLIT & FLARED
ONE (1) 12" LONG OR ONE (1)
18" LONG AS REQUIRED

12" OR 18"

2" MIN.

STOCK PIECE (CUT TO FIT)

P.V.C. SEWER PIPE
SDR 35

FOR PAVED AREAS
N.T.S.

NOTES:

1. FOR SIX INCH (6") VALVES AND SMALLER, USE SIX INCH (6") VALVE CAN ASSEMBLY.
   FOR EIGHT INCH (8") VALVES AND LARGER, USE EIGHT INCH (8") VALVE CAN ASSEMBLY.
   P.V.C COUPLING, WHEN REQUIRED, SHALL BE FURNISHED BY THE DISTRICT.

2. MEDIUM SKIRT COVER SHALL BE MARKED "WATER" FOR DOMESTIC WATER SYSTEM AND
   MARKED "RECYCLED WATER" AND PAINTED PURPLE FOR RECYCLED WATER SYSTEM.

WALNUT VALLEY WATER DISTRICT

VALVE CAN ASSEMBLY

STANDARD DRAWING No. 11

DATE: 02/05/10

R:\Standard Files\Drawings1\11.dwg
NOTES:
1. REDWOOD BOARDS SHALL BE PLACED ON THE HIGH GROUND SIDE OF THE POSTS.
2. SECOND HAND MATERIAL MAY BE USED WITH APPROVAL FROM THE DISTRICT.
3. SLOPE STABILIZER SHALL BE USED ON ALL SLOPES AS DIRECTED BY THE DISTRICT.
4. EACH REDWOOD BOARD SHALL BE FASTENED BY USING 2-16d NAILS TO EACH REDWOOD POST OR THREE-EIGHTH INCH (3/8") NUT AND BOLT WITH WASHERS TO EACH GALVANIZED PIPE. ALL HARDWARE SHALL BE GALVANIZED.
5. TRENCH BACKFILL SHALL BE CONSOLIDATED BY MECHANICAL COMPACTION. IN LIEU OF MECHANICAL COMPACTION, SOIL CEMENT MAY BE USED. HOWEVER, THE TOP TWELVE INCHES (12") OF BACKFILL SHALL BE NATIVE SOIL, MECHANICALLY COMPACTED.
6. SPACING OF STABILIZERS FOR GROUND SLOPE BETWEEN VALUES SHOWN IN TABLE "A" MAY BE PROPORTIONED.

WALNUT VALLEY WATER DISTRICT
SLOPED TRENCH EROSION CONTROL

TABLE A

<table>
<thead>
<tr>
<th>GROUND SLOPE</th>
<th>Y (MAX.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1</td>
<td>5'</td>
</tr>
<tr>
<td>1 1/2:1</td>
<td>9'</td>
</tr>
<tr>
<td>2:1</td>
<td>12'</td>
</tr>
<tr>
<td>2 1/2:1</td>
<td>16'</td>
</tr>
<tr>
<td>3:1</td>
<td>20'</td>
</tr>
</tbody>
</table>
### Thrust Blocks

**Walnut Valley Water District**

**Thrust Blocks**

**Notes:**
1. Concrete should have a 28-day compressive strength of 2000 PSI minimum.
2. Concrete shall be poured against undisturbed soil.
3. Block height should be less than one-half the total depth from finished surface to the bottom of the block, but not less than the pipe diameter.
4. Block width should vary between one and two times the block height.

**Table:**

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>4&quot;</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
<th>14&quot;</th>
<th>16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure 150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
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<tr>
<td>90°</td>
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<td>45°</td>
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<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
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</tr>
<tr>
<td>30°</td>
<td>3.0</td>
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<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
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<tr>
<td>15°</td>
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<td>3.0</td>
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<td>Tee</td>
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<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
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<tr>
<td>Cross</td>
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<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
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<tr>
<td>Cap</td>
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<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Branch Size Required:** Thrust blocks are required when any valve or stub-out connected to cross.

**Soil Type:**
- Muck, Peat, Etc.
- Soft Clay
- Sand
- Sand and Gravel
- Sand and Gravel with Clay
- Hard Pan

**Soil Strength (lb/ft):**
- 0
- 500
- 1000
- 1500
- 2000
- 4000
- 5000

**Multiplier:**
- 0.00
- 4.00
- 2.00
- 1.33
- 1.00
- 0.50
- 0.40

**Tables based on estimated bearing strength of undisturbed soil from buried pipe design second edition by Dr. A.P. Moser, New York, 2001**
## Anchor Blocks

**WALNUT VALLEY WATER DISTRICT**

**IN-LINE REDUCER**

**VERTICAL BENDS**

**IN-LINE VALVE**

### Anchor Block Volume

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>4&quot;</th>
<th>8&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
<th>14&quot;</th>
<th>16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESSURE</td>
<td>20</td>
<td>24</td>
<td>30</td>
<td>45</td>
<td>60</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>90°</td>
<td>28.0</td>
<td>37.0</td>
<td>67.0</td>
<td>75.0</td>
<td>97.0</td>
<td>129.0</td>
<td>146.0</td>
</tr>
<tr>
<td>60°</td>
<td>24.0</td>
<td>32.0</td>
<td>49.0</td>
<td>66.0</td>
<td>84.0</td>
<td>112.0</td>
<td>126.0</td>
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<tr>
<td>45°</td>
<td>20.0</td>
<td>26.0</td>
<td>40.0</td>
<td>53.0</td>
<td>69.0</td>
<td>91.0</td>
<td>103.0</td>
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<tr>
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<td>38.0</td>
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<td>65.0</td>
<td>73.0</td>
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<td>11.0</td>
<td>14.0</td>
<td>22.0</td>
<td>29.0</td>
<td>37.0</td>
<td>50.0</td>
<td>56.0</td>
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<tr>
<td>11°</td>
<td>8.0</td>
<td>8.0</td>
<td>11.0</td>
<td>15.0</td>
<td>19.0</td>
<td>26.0</td>
<td>29.0</td>
</tr>
</tbody>
</table>

### Anchor sizes

1. **CONCRETE SHOULD HAVE A 28-DAY COMpressive STRENGTH OF 2000 PSI MINIMUM.**
2. **CONCRETE SHALL BE POURED AGAINST UNDISTURBED SOIL.**
3. **ANCHOR ROD SHALL BE REINFORCING STEEL WITH A MINIMUM 1/2" DIAMETER.**
4. **ANCHOR ROD SHALL BE INSTALLED A MINIMUM 3" CLEAR FROM THE EDGE OF CONCRETE.**

---

**REVISIONS**

---

**ERIK J. HITCHMAN**

**STATE OF CALIFORNIA**

**CIVIL ENGINEER**

**No. C49185 Exp. 09/30/2010**

**DATE: 02/05/10**

**STANDARD DRAWING No. 14**

---

**APPROVED BY:**

**DRAWN BY:** TD/ML
**NOTES:**

1. CONCRETE FOR ANCHOR SHALL HAVE A 28-DAY COMpressive STRENGTH OF AT LEAST 2000 psi.
2. TRENCH BACKFILL SHALL BE CONSOLIDATED BY MECHANICAL COMPACTION. IN LIEU OF MECHANICAL COMPACTION, SOIL CEMENT MAY BE USED. HOWEVER, THE TOP TWELVE INCHES (12") OF BACKFILL SHALL BE NATIVE SOIL, MECHANICALLY COMPACTED.
3. SPACING OF ANCHORS FOR PIPE SLOPES BETWEEN VALUES SHOWN IN TABLE "A" MAY BE PROPORTIONED.

---

**WALNUT VALLEY WATER DISTRICT**

**SLOPED PIPE ANCHOR BLOCKS**

---

**SECTION A-A**

**SECTION B-B**

**PIECE ANCHOR DETAILS**

**ELEVATION**

**TABLE A**

<table>
<thead>
<tr>
<th>PIPE SLOPE (%)</th>
<th>DISTANCE (L) (MAX.)</th>
<th>DISTANCE (Z) (MAX.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y:1 (100)</td>
<td>12'</td>
<td>4'</td>
</tr>
<tr>
<td>67</td>
<td>14'</td>
<td>8'</td>
</tr>
<tr>
<td>50</td>
<td>16'</td>
<td>12'</td>
</tr>
<tr>
<td>40</td>
<td>18'</td>
<td>18'</td>
</tr>
<tr>
<td>33</td>
<td>20'</td>
<td>20'</td>
</tr>
</tbody>
</table>
EXISTING OR FUTURE IMPROVEMENTS

NOTES:
1. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING NO. 2.
2. FOR DIRECT TAP, SEE STANDARD DRAWING NO. 17.
3. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
4. FOR RECYCLED WATER SYSTEM, POLYMER CONCRETE METER BOX COVER AND READING LID SHALL BE PAINTED PURPLE AND MARKED "RECYCLED WATER".
5. FOR ADAPTED SERVICE, INSTALL ADAPTER SET TO FIT ADAPTED METER.
6. 12" AND SMALLER SADDLE SHALL BE SINGLE STRAP, LARGER THAN 12" SHALL BE DOUBLE STRAP.
7. SADDLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE MAIN.
8. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.28% OF LEAD CONTENT BY WEIGHT.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUAN.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>BRONZE SERVICE BADDLE WITH 3/4&quot; TAP</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>3/4&quot; BRONZE CORPORATION STOP, M.I.P. x FLARE</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>3/4&quot; COPPER TUBING, TYPE K SOFT</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>3/4&quot; COPPER BREATHER, 10&quot; HIGH (FOR M. V. 1973-18W-18-33)</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>3/4&quot; RADIATION RESISTANT BREATHER (BADGER MODEL 30)</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>13/8 x 24&quot; x 13&quot; POLYMER CONC. METER BOX (ARMORCAST AB001946PCX12)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>13/8 x 24&quot; POLYMER CONC. COVER W/ ORION RECESS (ARMORCAST AB0018800Q)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>5&quot; x 7&quot; POLYMER CONC. READING LID MARKED &quot;WATER&quot; (ARMORCAST AB000487)</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>3/4&quot; STAINLESS STEEL REINFORCED B.C. 80 P.V.C COUPLING, F.I.P. x F.I.P.</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>3/4&quot; P.V.C. THREADED PLUG</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>ZINC ANODE</td>
</tr>
</tbody>
</table>

WALNUT VALLEY WATER DISTRICT

3/4" WATER SERVICE ASSEMBLY

REVISIONS

06/14/11

TD

C49185

EXP. 09/30/2010
NOTES:
1. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING NO. 5.
2. FOR DIRECT TAP, SEE STANDARD DRAWING NO. 17.
3. FOR ADAPTED SERVICE, INSTALL ADAPTER SET TO FIT ADAPTED METER.
4. 12" AND SMALLER SADDLE SHALL BE SINGLE STRAP. LARGER THAN 12" SHALL BE DOUBLE STRAP.
5. SADDLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE MAIN.
6. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.26% OF LEAD CONTENT BY WEIGHT.
  * COPPER BETTER TO BE CENTERED IN METER BOX.

ITEM | QUAN. | DESCRIPTION
--- | --- | ---
1 | 1 | BRONZE SERVICE SADDLE WITH 1" TAP
2 | 1 | 1" BRONZE CORPORATION STOP, M.I.P. x FLARE
3 | - | 1" COPPER TUBING, TYPE K SOFT
4 | 1 | 1" COPPER BETTER WITH DUAL OUTLET CONNECTIONS, 18" HIGH (FORD VB/174-85217-007-NL)
5 | 1 | 1" RADIO READ METER (BADGER MODEL 70)
6 | 1 | 17" x 30" x 12" POLYMER CONC. METER BOX (ARMORCAST A0001560/PCX12)
7 | 2 | 1" STAINLESS STEEL REINFORCED SCH. 80 P.V.C. COUPLING, F.I.P. x F.I.P.
8 | 2 | 1" P.V.C. THREADED PLUG
9 | 1 | ZINC ANODE

WALNUT VALLEY WATER DISTRICT

1" WATER SERVICE ASSEMBLY
(FOR RESIDENTIAL ONLY)
NOTES:
1. CORPORATION STOP AND COPPER TUBING SHALL BE WRAPPED WITH POLYETHYLENE FILM 
   A MINIMUM OF 3 FEET FROM MAIN.
2. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% 
   OF LEAD CONTENT BY WEIGHT.

MAXIMUM RECOMMENDED DIRECT TAP SIZE FOR 3" THROUGH 18"

<table>
<thead>
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ITEM | QUAN. | DESCRIPTION
-----|-------|------------------
1    | 1     | BRONZE CORPORATION STOP, M.I.P. x FLARE
2    | 1     | 90° COPPER BEND, F.C.T. x FLARE
3    | -     | COPPER TUBING, TYPE "K" SOFT

WALNUT VALLEY WATER DISTRICT

DIRECT TAP FOR DUCTILE IRON PIPE

APPROVED BY: [Signature]  
DRAWN BY: TDVD  
DATE: 02/05/10
NOTES:
1. FOR CONNECTION TO STEEL MAIN, SEE STANDARD DRAWING No. 5.
2. FOR PRICE LIST, SEE STANDARD DRAWING No. 17.
3. FOR RECYCLED WATER SYSTEM, INSTALLATION CONTRACTOR SHALL WRAP RECYCLED WARNING TAPE AROUND COPPER TUBING - TAPE SHALL BE FURNISHED BY THE DISTRICT.
4. FOR RECYCLED WATER SYSTEM, POLYMER CONCRETE METER BOX COVER AND READING LID SHALL BE PAINTED PURPLE AND MARKED "RECYCLED WATER".
5. FOR ADAPTED SERVICE, INSTALL ADAPTER SET TO FIT THE ADAPTED METER.
6. BOLTS, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.
7. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.26% OF LEAD CONTENT BY WEIGHT.

ITEM | QUAN. | DESCRIPTION
--- | --- | ---
1 | 1 | BRONZE DOUBLE-DRAIN SERVICE BOLTED WITH 1 1/2" TAP
2 | 1 | 1 1/2" BRONZE CORPORATION STOP, M.I.P. x FLARE
3 - | 1 | 1 1/2" COPPER TUBING, TYPE "K" SOFT FLARE
4 | 1 | 1 1/2" COPPER COUPLING M.I.P. x FLARE
5 | 1 | 1 1/2" CUSTOM SETTER WITH BY-PASS, 18" HIGH (FORD V176-1BB-11-65)
6 | 1 | SET OF 1 1/2" SILICONE BRONZE NUTS AND BOLTS AND FULL-FACE CLOTH-INSERTED GASKET
7 | 1 | 1 1/2" RADIAL READER METER (BARKER MODEL 125)
8 | 1 | 1" x 1 1/2" POLYMER CONC. METER BOX (AROMRCAST AB00016460PCX12)
9 | 1 | 1" x 1 1/2" POLYMER CONC. COVER W ORION RECESS (AROMRCAST AB00016460D2)
10 | 1 | 8" x 14" POLYMER CONC. READING LID MARKED "WATER" (AROMRCAST AB00009862)
11 | 1 | 1 1/2" BRASS CLOSE NIPPLE
12 | 1 | 1 1/2" STAINLESS STEEL REINFORCED SCH. 80 P.V.C. COUPLING, F.I.P. x F.I.P.
13 | 1 | 1 1/2" P.V.C. THREADED PLUG
14 | 1 | REDWOOD OR 1" SCH. 40 P.V.C. PIPE CROSS BRACE
15 | 1 | ZINC ANODE

WALNUT VALLEY WATER DISTRICT
1 1/2" WATER SERVICE ASSEMBLY

APPROVED BY: 
DRAWN BY: AA/ML

REVISIONS
08/14/11 TD

E.RK. HITCHCOCK
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. C49165
Exp. 09/30/2015

STANDARD DRAWING No. 18
DATE: 02/05/10
NOTES:
1. FOR CONNECTION TO STEEL MAIN, SEE STANDARD DRAWING No. 5.
2. FOR DIRECT TAP, SEE STANDARD DRAWING No. 17.
3. FOR ADAPTED SERVICE, INSTALL ADAPTER SET TO FIT THE ADAPTED METER.
4. BACCELATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.
5. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.26% OF LEAD CONTENT BY WEIGHT.

ITEM QUAN DESCRIPTION
1 1 BRONZE DOUBLE-BAND SERVICE BAND WITH 1 1/2" TAP
2 1 1 1/2" BRONZE CORPORATION STOP, M.I.P. x FLARE
3 1 1 1/2" COPPER TUBING, TYPE A SOFT
4 1 1 1/2" COPPER COUPLING M.I.P. x FLARE
5 1 1/2" CUSTOM SETTER WITHOUT BY-PASS, 18" HIGH (FORD VB79-56037-123-NL)
6 1 SET OF 1 1/2" SILICONE BRONZE NUTS AND BOLTS AND FULL FACE CLOTH-INSERTED GASKET
7 1 1 1/2" RADIAL READ METERS (BANDER MODEL 120)
8 1 24" x 36" x 12" POLYMER CONC. METER BOX ARMOCAS A6001974/PCX12
9 1 24" x 36" POLYMER CONC. COVER W/ ORION RECESS ARMOCAS A6001976X2
10 1 8" x 12" POLYMER CONC. READING FID MARKED "WATER" ARMOCAS A6000463
11 1 1 1/2" BRASS CLOSE NIPPLE
12 2 1 1/2" STAINLESS STEEL REINFORCED SCH. 80 P.V.C. COUPLING, FIP x FIP
13 2 1 1/2" P.V.C. THREADED PLUG
14 1 REDWOOD OR 1 1/2" SCH. 40 P.V.C. PIPE CROSS BRACE
15 1 ZINC ANODE

WALNUT VALLEY WATER DISTRICT

1 1/2" WATER SERVICE ASSEMBLY
(FOR RESIDENTIAL ONLY)

APPROVED BY:

DRAWN BY: VD/TD

REVISIONS
06/14/11 TD

ERI.K J. HITCHCFLM
CERTIFIED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

No. C49195
Exp. 02/30/2010

STANDARD DRAWING No.
18.B

DATE: 01/31/11
NOTE:
1. THE DEVELOPER SHALL SUPPLY AND INSTALL AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE AT EACH METER ASSEMBLY PRIOR TO DISTRICT PROVIDING PERMANENT DOMESTIC SERVICE.
2. ALL EXPOSED BURIED METAL SHALL BE COATED WITH "METER GUARD 301" CORROSION PROTECTION GREASE. GREASE SHALL BE FURNISHED BY THE CONTRACTOR.
3. ALL PIPE, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

ITEM QUAN. | DESCRIPTION
---|---
1 | 1 METER ASSEMBLY (RADDER METER)
2 | 2 GATE VALVES, FLANGED WITH N.R.R.S. HANDWHEEL
3 | 2 STEEL SPOOLS, 5" I.D. X 5" O.D. X 4' LONG
4 | 1 VISUAL COUPLING, STYLE 77
5 | 1 STEEL M.L.M. PIPE (CUT-TO-FIT IN FIELD)
6 | 4 BLIP-ON WELD FLANGE FLAT-FACED 150#
7 | 1 BLIND FLANGE FLAT-FACED 150#
8 | 4 ADJUSTABLE PIPE SUPPORT (STD. DWV. NO. 21)
9 | 1 GALVANIZED STEEL LADDER WITH WALL BRACKETS (AL-HAMIRA A-3400)
10 | 4 #4 REBAR, WELDED TO PIPE
11 | 1 3" X 6" HINGED DIAMOND PLATE COVER, GALVANIZED, WITH LOCKING MECHANISM
12 | 1 3" X 6" GRADE RING (CASE "A", 12" HIGH; CASE "B", 8" HIGH)
13 | 1 PRECAST CONCRETE VALVE (BEST CONCRETE PRODUCTS MC-5 OR EQUAL) 5" X 7" FOR 4" METER, 8" X 6" FOR 6" OR 8" METER (INSIDE DIMENSION)
14 | 2 1/2" VALVE CANS AND LIDS (CENTERED ABOVE METER READING)

WALNUT VALLEY WATER DISTRICT

LARGE METER ASSEMBLY (4", 6" & 8")

APPROVED BY: [Signature]

DRAWN BY: TD/ML

STANDARD DRAWING No. 19

DATE: 02/05/10

R:\Standard Files\Drawings\19\19a.dwg
TYP. DOUBLE DETECTOR CHECK ASSEMBLY

NOTES:
1. ITEMS No. 1-15 FROM WATER MAIN TO STREET RIGHT-OF-WAY AND ITEM No. 16 SHALL BE FURNISHED, INSTALLED AND LICENSED BY THE DISTRICT. THE DEVELOPER SHALL PAY ALL WORK. ITEMS No. 16-18 AND MATERIALS FOR ON-SITE SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER.
2. ANY DEVIATION FROM DESIGN OR MATERIALS SHOWN HEREIN WITHOUT WRITTEN PERMISSION OF THE DISTRICT WILL PRECLUDE PERMANENT WATER SERVICE FOR FIRE PROTECTION.
3. THE OWNER WILL BE RESPONSIBLE FOR THE INSTALLATION, REPAIR AND MAINTENANCE OF ALL FACILITIES INSTALLED FOR FIRE SERVICE DOWNSTREAM OF THE DISTRICT STUB-OUT.
4. THE OWNER SHALL NOTIFY THE DISTRICT AT LEAST 40-EIGHT (48) HOURS PRIOR TO ANY TESTING OR OTHER USE OF WATER FROM THE FIRE PROTECTION SYSTEM.
5. THE MAKE, MODEL, SIZE, SERIAL NUMBER OF THE DOUBLE DETECTOR CHECK AND THE DATE OF INSTALLATION SHALL BE PROVIDED TO THE DISTRICT UPON COMPLETION OF ITS INSTALLATION.
6. THE DISTRICT SHALL CHARGE THE OWNER FOR ANY UNAUTHORIZED USE OF WATER FROM THIS FIRE SERVICE OR ITS APPURTENANCES.
7. THIS FIRE LINE SHALL NOT INTERCONNECT WITH ANY OTHER WATER SYSTEM.
8. THE DOUBLE DETECTOR CHECK ASSEMBLY SHALL BE LOCATED IN A PROTECTED AREA, OUTSIDE OF THE STREET RIGHT-OF-WAY, AT A LOCATION ACCEPTABLE TO BOTH THE DISTRICT AND APPLICANT.
9. TEST COCKS FITTED WITH BRASS PLUGS SHALL BE PROVIDED FOR THE MAINLINE AND BY-PASS DOUBLE DETECTOR CHECKS.
10. THE DISTRICT RESERVES THE RIGHT TO DETERMINE THE LOCATION OF THE BY-PASS ASSEMBLY IN RELATION TO THE DOUBLE DETECTOR CHECK VALVE.
11. TEMPORARY LINES, FLANGED WITH TAP AND THREE-QUARTERS INCH (3/4") MANUAL AIR RELEASE ASSEMBLY SHALL BE RETURNED TO THE DISTRICT AFTER DEVELOPER HAS CONNECTED TO THE FIRE SERVICE.
12. ALL EXPOSED BURIED METAL SHALL BE COATED WITH "METAL GUARD 301" CORROSION PROTECTION GREASE. GREASE SHALL BE FURNISHED BY THE CONTRACTOR.
13. ALL PIPE, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% BY WEIGHT OF LEAD CONTENT.

SPECIAL NOTES:
1. ON-SITE PUMPING OR LOOP SYSTEM WILL REQUIRE INSTALLATION OF A REDUCED PRESSURE PRINCIPLE DETECTOR BACKFLOW PREVENTION DEVICE (EPoxy LINED IN LINE OF A DOUBLE DETECTOR CHECK ASSEMBLY, INTERIOR OF DOUBLE CHECK ASSEMBLY SHALL BE EPOXY LINED (4 MILS) OR GALVANIZED. ALL BY-PASS FITTINGS AND PIPE SHALL BE BRASS OR BRONZE.

WALNUT VALLEY WATER DISTRICT

FIRE SERVICE ASSEMBLY (6", 8" & 10") WITH DOUBLE DETECTOR CHECK ASSEMBLY

APPROVED BY:  
DRAWN BY:  
STANDARD DRAWING No.:  
DATE:  
02/05/10
NOTE:
ALL EXPOSED METAL SURFACES TO BE PAINTED IN ACCORDANCE WITH THE DISTRICT SPECIFICATIONS, EXCEPT FOR THE THREADS.

WALNUT VALLEY WATER DISTRICT

ADJUSTABLE PIPE SUPPORT

CUT FROM SCH. 40 STEEL PIPE ONE SIZE LARGER THAN PIPE OR FITTING TO BE SUPPORTED

2" BLACK STD. STEEL PIPE

1½ STD. STEEL PIPE

1½ I.P. THREAD

1½ I.P. THREAD HEX LOCKNUTS (2 Eas.)

WASHER

2" BLACK STD. STEEL PIPE

6" x 6" x 1½ STEEL PLATE

FINISHED SURFACE

GROUT

6" SQ.

5" MIN.

8" MIN.

5" THREADED MIN.

VARIABLE

3" WIDE

90°
BONDING CLIP WELDING DETAIL
N.T.S.

BONDING CLIP DETAIL
N.T.S.

NOTES:
1. BONDING CLIP SHALL BE SPACED 45° FROM TOP OF PIPE.
2. CEMENT MORTAR LINING AND COATING APPLY IN FIELD SHALL CONFORM TO SECTION 4.8 "FIELD JOINT" OF AWWA C205-85.
3. FIELD WELDING SHALL CONFORM TO AWWA C206-87.

WALNUT VALLEY WATER DISTRICT

RUBBER GASKET BELL-AND-SPIGOT JOINT
WITH BOND CLIP

APPROVED BY:  

DRAWN BY:  TD/ML

STD. DRAWING NO. 22  
DATE 02/05/10

REVISIONS
1. BUTT STRAP SHALL BE SHIPPED IN HALVES AND BARE.
2. CEMENT MORTAR LINE AND COATING APPLY IN FIELD SHALL CONFORM WITH SECTION 4.6 "FIELD JOINT" OF AWWA STANDARD C205-95.
3. ALL FABRICATED STEEL FITTINGS SHALL CONFORM TO AWWA C-200 AND C208-96.

WALNUT VALLEY WATER DISTRICT

Butt Strap Enclosure
NOTES:
1. GAP ROD SHALL BE WELDING ON.
2. CEMENT MORTAR LINING AND COATING APPLY IN FIELD SHALL CONFORM TO SECTION 4.6 "FIELD JOINT" OF AWWA C205-95.
3. FIELD WELDING SHALL CONFORM TO AWWA C206-97.
NOTES:
1. WATER MAIN SIZE TO BE DETERMINED BY WALNUT VALLEY WATER DISTRICT.
2. GATE VALVES AND VALVE BOX ASSEMBLY NOT TO BE LOCATED IN CONCRETE GUTTER.
3. IRRIGATION METERED SERVICE SHALL BE INSTALLED A MINIMUM 5 FEET FROM DOMESTIC METERED SERVICE, FIRE HYDRANT, BLOW-OFF, AUTO. AIRVAC. OR FIRE SERVICE.
4. BASED ON STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION STD. PLAN 101-2.

WALNUT VALLEY WATER DISTRICT

TYPICAL WATER FACILITY LAYOUT
(1 OF 2)
EXAMPLE: FIRE HYDRANT

A) WHEN FIVE FEET (6') SIDEWALKS ARE ADJACENT TO CURB, CENTERLINE OF HYDRANT SHALL BE SIX FEET SIX INCHES (6'-6") FROM CURB FACE.

B) WHEN SIDEWALKS ARE CONSTRUCTED AT WIDTHS GREATER THAN SIX FEET (6') FROM CURB FACE TO BACK OF SIDEWALK, CENTERLINE OF HYDRANT SHALL BE EIGHTEEN TO TWENTY-FOUR INCHES (18" TO 24") FROM CURB FACE.

C) WHEN SIDEWALKS ARE PLACED AWAY FROM CURB CENTERLINE OF HYDRANT SHALL BE EIGHTEEN TO TWENTY-FOUR INCHES (18" TO 24") FROM CURB FACE.

D) WHEN INVERTED SHOULDER IS CONSTRUCTED, HYDRANT SHALL BE CENTERED EIGHTEEN TO TWENTY-FOUR INCHES (18" TO 24") BEHIND EDGE OF PAVEMENT.

LOCATION OF ABOVE GROUND UTILITIES
IN RELATION TO SIDEWALK AND CURB

NOTES:
1. WHEN SIDEWALKS ARE CONSTRUCTED IN VARIOUS RELATIONSHIPS TO CURBS, ABOVE GROUND UTILITIES SUCH AS AIR RELEASE VALVES, FIRE HYDRANTS, AND BLOW-OFFS SHALL BE LOCATED AS SHOWN ABOVE.
2. BASED ON STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION STD. PLAN 101-2.

WALNUT VALLEY WATER DISTRICT

TYPICAL WATER FACILITY LAYOUT
(2 OF 2)
ABOVE GROUND UTILITIES
SUCH AS FIRE HYDRANTS,
BLOW-OFFS, & AUTO. AIR
RELEASE VALVES

IF POST NECESSARY
REPEAT DIMENSIONS
PER OTHER SIDE

FOR LOCATION
SEE STD. DWG.
No. 26

EXIST. OR FUTURE CURB

TRAFFIC FLOW

PLAN
N.T.S.

6" DIA. x 7'-0" SCHEDULE
40 STEEL PIPE FILL
WITH P.C.C. GROUT

4'-0"

P.C.C. ENCASEMENT
24'-0" MIN.

ELEVATION
N.T.S.

NOTES:
1. INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL ALL GUARD POSTS.
2. PIPE SHALL BE PAINTED ONE COAT OF RED AND ONE COAT OF "HI-VIS YELLOW"
   - PAINT SHALL BE FURNISHED BY DISTRICT.
3. PORTLAND CONCRETE CEMENT SHALL BE TYPE I OR II.

WALNUT VALLEY WATER DISTRICT
GUARD POST DETAILS

REVISIONS

E.R.I.K. J. HITCHMAN
No. C49185
Exp. 09/30/2010

CIVIL

APPRAOVED BY:

DRAWN BY:  TD/ML

STANDARD DRAWING No. 27

DATE:  02/05/10

R:\Standard Files\Drawings\27.dwg
#12 COPPER DETECTOR WIRE
MINIMUM OF TWO TIES PER JOINT
(ONE ADJACENT TO THE COLLAR
AND THE OTHER AT THE CENTER
OF JOINT)

SEE STANDARD BACKFILL AND
REPAVEMENT SECTION PER
GOVERNING AGENCY STANDARD

SAND TRENCH BACKFILL
COMPACTED TO AT LEAST 90% OF
RELATIVE COMPACTION

INSTALL POLYETHYLENE FILM
PER AWWA STANDARD C-105
METHOD A
6" TYPICAL

6" SAND SHADING
H.T.H. TABLET
PIPE

6" SAND BEDDING

PIPE ZONE SECTION

PERMATEX

H.T.H. TABLET AFTER INSTALLATION OF PIPE IN
TRENCH, TABLETS TO BE INSTALLED AT TOP
OF PIPE.

PIPE

CHLORINIZATION DETAIL

NOTES:
1. THE EXCAVATED TRENCH MATERIAL, UNLESS OTHERWISE NOTED ON PLANS, SHALL BE
FREE OF ROCKS OVER 1-1/2 INCHES IN DIAMETER AND SUFFICIENTLY PERMEABLE TO READILY
ABSORB WATER AND SHALL BE FREE OF ROOTS, TRASH, DIRT CLODS AND ORGANIC MATTER.
THERE MUST BE ENOUGH FINES TO SURROUND ALL FIRM PARTICLES TO PRODUCE A
MIXTURE WITHOUT OBVIOUS VOIDS. ANY UNSUITABLE TRENCH MATERIAL SHALL BE
REMOVED, TRANSPORTED AND DISPOSED AT APPROVED LANDFILL.
2. THE EXCAVATED TRENCH MATERIAL TO BE USED FOR BACKFILL SHALL ONLY BE USED IF
ALLOWED BY THE JURISDICTIONAL AGENCY.
3. THE INSTALLATION CONTRACTOR IS RESPONSIBLE TO VERIFY AND COMPLY WITH ALL
PROVISIONS OF AWWA C851-05 LATEST STANDARD.

NUMBER OF 5-g CALCIUM HYPOCHLORITE TABLETS REQUIRED FOR DOSE OF 25 mg/L*

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* PER TABLE 2 OF AWWA C851-05

WALNUT VALLEY WATER DISTRICT

PIECE ZONE TRENCH BACKFILL & LINE CHLORINATION

APPROVED BY: [Signature]
DRAWN BY: TDVD

STANDARD DRAWING No. 28
DATE: 02/05/10
PIPE CRADLE DETAIL
N.T.S.

PER BRIDGE PLAN

EXTRA LONG NUT
1" U-BOLT
CENTER PIPE ON HANGER
NUT (TYP.)

3" MIN.

DOUBLE NUT (TYP.)

TS 4 x 2 x \(\frac{1}{4}\)
3" MIN.

PIPE CRADLE DETAIL
N.T.S.

NOTES:
1. ALL HANGER AND CRADLE MATERIAL SHALL BE GALVANIZED (AFTER FABRICATION) AND FURNISHED AND INSTALLED BY THE INSTALLATION CONTRACTOR.
2. PLACE 100# BUILDING FELT BETWEEN PIPE AND CRADLE.
3. DIMENSION IS EQUAL TO NOMINAL PIPE DIAMETER DIVIDED BY SIX.

WALNUT VALLEY WATER DISTRICT

PIPE CRADLE AND HANGER ASSEMBLY

APPROVED BY: 

DRAWN BY: TD/ML 

STANDARD DRAWING No. 31 

DATE: 02/05/10
NOTES: BEDDING REQUIREMENTS

1. BEDDING FOR SEWER LINES SHALL CONFORM TO SECTION 306-1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION)

2. BEDDING FOR STORM DRAIN LINES SHALL CONFORM TO THE L.A.C.P.W.D. (FLOOD CONTROL DIVISION)

3. BEDDING FOR UTILITY LINES SHALL CONFORM TO THE REQUIREMENT OF THE UTILITY COMPANY AS LONG AS IT MEETS OR EXCEEDS THAT OF SECTION 306-1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION)

4. COLDMILLING AND PAVING SHALL BE CONTINUOUS OVER CONSECUTIVE CUTS UNLESS THE DISTANCE BETWEEN THE CUTS (AFTER BEING OVERLAI IN ACCORDANCE TO THIS STANDARD) IS MORE THAN 20 FEET.

SPECIAL NOTE:

IF THE STREET HAS BEEN PAVED WITHIN 3 YEARS OR SLURRIED WITHIN 2 YEARS, THEN COMPLY WITH CITY ORDINANCE No. 2083.

WALNUT VALLEY WATER DISTRICT

TYPICAL BACKFILL AND REPAVEMENT SECTION WITHIN CITY OF WEST COVINA
NOTES:
ON A CASE-BY-CASE BASIS, THE CITY OF DIAMOND BAR WILL ALLOW FOR AN EXCEPTION TO THE TRENCH BACKFILL STANDARD PROVIDED THAT:
1. THE MINIMUM AC SECTION SHALL BE 4 INCHES.
2. ALL TRENCH WORK BELOW 25 LINEAR FEET SHALL COMPLY WITH THE CITY'S APPROVED TRENCH BACKFILL STANDARD.
3. COMPACTED BACKFILL AS PER SECTION 306-1.3.6 OF THE LATEST STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
CONDITION A: FOR TRENCH PARALLEL TO STREET

CONDITION B: FOR TRENCH PERPENDICULAR TO STREET

NOTES:
1. PAVEMENT REPLACEMENT SECTION SHALL BE AS SHOWN ON THE APPROVED IMPROVEMENT PLANS. MINIMUM SECTION SHALL BE THREE INCHES (3") A.C. OR EXISTING PAVEMENT THICKNESS PLUS ONE INCH (1") WHICHEVER IS GREATER ON SIX INCHES (6") AGGREGATE BASE, OR GREATER.
2. ASPHALT CONCRETE OVERLAY SHALL BE PLACED AT LEAST SIXTY (60) BUT NOT MORE THAN ONE HUNDRED AND TWENTY (120) DAYS AFTER TRENCH PAVING.
3. IF THE LANE OR LIP OF GUTTER OR EDGE OF PAVEMENT IS WITHIN FOUR FEET (4') OF THE LIMITS OF ASPHALT CONCRETE OVERLAY, THE LIMITS MAY BE EXTENDED AS DETERMINED IN THE FIELD BY THE CITY ENGINEER.
4. PLACE ONE EXTRA INCH (1") OF ASPHALT CONCRETE OVERLAY WHEN TRENCH IS PARALLEL TO TRAFFIC LANES.
5. THE INSTALLATION CONTRACTOR IS RESPONSIBLE TO VERIFY AND COMPLY WITH ALL PROVISIONS OF THE CITY'S LATEST STANDARDS.
NOTES:

1. PERMANENT TRENCH RESURFACING SHALL CONSIST OF AN ASPHALT CONCRETE SURFACE COURSE OF TYPE C2-AR-4000 ONE AND ONE-HALF INCHES (1 1/2") THICK PLACED ON AN ASPHALT CONCRETE BASE COURSE OF TYPE B-AR-4000.

2. SAW CUTS SHALL BE ONE AND ONE-HALF INCHES (1 1/2") DEEP. IF SAW CUT IS WITHIN THREE FEET (3') OF A PREVIOUS PARALLEL SAW CUT OF 3 FEET OR GREATER IN LENGTH OR A CONCRETE EDGE, THE EXISTING PAVEMENT SHALL BE REMOVED TO SAID SAW CUT OR CONCRETE EDGE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

3. THE CONTACT SURFACES OF EXISTING PAVEMENT, MANHOLE FRAMES AND SHAFTS AND CONCRETE SURFACES SHALL BE GIVEN A TACK COAT BEFORE PERMANENT TRENCH RESURFACING IS PLACED.

4. TEMPORARY TRENCH RESURFACING MAY BE PLACED AT THE CONTRACTOR'S EXPENSE. IT SHALL BE PLACED LEVEL WITH THE EXISTING PAVEMENT ON COMPACTED TRENCH BACKFILL AND SHALL BE MAINTAINED FREE OF DEPRESSIONS.

5. PERMANENT OR TEMPORARY TRENCH RESURFACING SHALL BE PLACED IMMEDIATELY AFTER TRENCH BACKFILL.

6. THE WIDTH OF P.C.C. PAVEMENT REPLACEMENT SHALL BE A MINIMUM OF TEN FEET (10') WIDE AND/OR TO THE NEAREST CONSTRUCTION JOINT WITH #4 DOWELS EPOXIED @ TWELVE INCHES (12") O.C.

7. ANY TUNNELING UNDER EXISTING CURB AND GUTTER SHALL REQUIRE A SLURRY BACKFILL TO THE SATISFACTION OF THE INSPECTOR.

8. THE INSTALLATION CONTRACTOR IS RESPONSIBLE TO VERIFY AND COMPLY WITH ALL PROVISIONS OF THE CITY'S LATEST STANDARDS.
NOTES:

1. THE EXTENT OF REPAIRS FOR CONCRETE CUTS NOT SHOWN ON THIS STANDARD OR CUTS MADE WITHIN 900 mm (3') OF EXISTING PATCHES, CRACKS, OR DETERIORATED SLABS SHALL BE DETERMINED BY THE ENGINEER.

2. CONCRETE PAVEMENT SHALL BE REMOVED TO SSPWC 300-1.3.

3. BACKFILL AND DENSIFICATION SHALL CONFORM TO SSPWC 306-1.3.

4. TEMPORARY RESURFACING SHALL BE PLACED PER SSPWC 306-1.5.1.

WALNUT VALLEY WATER DISTRICT

TYPICAL BACKFILL AND REPAVEMENT SECTION
WITHIN UNINCORPORATED LOS ANGELES COUNTY

(1 OF 2)
CASE I - WITHOUT BASE

CASE II - WITH BASE

CASE III - AC PVMT ON PCC PVMT

NOTES:
1. BACKFILL AND DENSIFICATION SHALL CONFORM TO SSPWC 306-1.3.
2. TEMPORARY RESURFACING SHALL BE PLACED PER SSPWC 306-1.5.1.
LONGITUDINAL TRENCH PAVEMENT RESTORATION (LANE)

NOTES:
1. AC SHALL BE B-AR-4000 PER "GREEN BOOK" OR APPROVED EQUAL.
2. WHERE DOWEL RS ARE REQUIRED, USE #6 AT 36 INCHES ON CENTER ALONG ALL JOINTS.
3. PCC PAVEMENT SHALL HAVE 3 DAY STRENGTH OF 2500 PSI MINIMUM, USE HIGH EARLY STRENGTH CONCRETE ON HIGH TRAFFIC STREETS, IF REQUIRED BY CITY ENGINEER.
4. PCC PAVEMENT PLACEMENT SHALL BE PER APWA STANDARD PLAN 132-1 UNLESS OTHERWISE STATED HEREIN.
5. ALL STREET IMPROVEMENTS AFFECTED SHALL BE REPLACED TO CITY STANDARDS.
6. WHERE REMAINING PAVEMENT WIDTH FROM THE SAWCUT LINE TO GUTTER, CURB OR EDGE OF PAVEMENT IS LESS THAN 24 INCHES FOR AC OR 36 INCHES FOR PCC, FULL DEPTH PAVEMENT REPAIR SHALL EXTEND TO GUTTER, CURB OR EDGE OF PAVEMENT.
7. BASE SHALL BE CAB OR CM B PER STD. SPECS. (REV. OCTOBER 2008).

<table>
<thead>
<tr>
<th>EXISTING SECTION</th>
<th>NEW PAVEMENT (A)</th>
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<tbody>
<tr>
<td>AC ON NATIVE</td>
<td>AC = T + 1&quot;, 4&quot; MIN.</td>
<td>TOP 6&quot; NATIVE COMPACTED TO 95%</td>
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<tr>
<td>AC ON BASE MATERIAL</td>
<td>AC = T + 1&quot;, 4&quot; MIN.</td>
<td>CAB COMPACTED TO 95% = 8&quot;, 6&quot; MIN.</td>
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<td>AC ON PCC</td>
<td>AC = T</td>
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WALNUT VALLEY WATER DISTRICT

TYPICAL BACKFILL AND REP AVEMENT SECTION
WITHIN CITY OF POMONA
(1 OF 3)
LONGITUDINAL TRENCH PAVEMENT RESTORATION (SHOULDER)

NOTES:
1. AC SHALL BE B-AR-4000 PER "GREEN BOOK" OR APPROVED EQUAL.
2. WHERE DOWELS ARE REQUIRED, USE #6 AT 36 INCHES ON CENTER ALONG ALL JOINTS.
3. PCC PAVEMENT SHALL HAVE 3 DAY STRENGTH OF 2500 PSI MINIMUM. USE HIGH EARLY STRENGTH CONCRETE ON HIGH TRAFFIC STREETS, IF REQUIRED BY CITY ENGINEER.
4. PCC PAVEMENT PLACEMENT SHALL BE PER APWA STANDARD PLAN 132-1 UNLESS OTHERWISE STATED HEREIN.
5. ALL STREET IMPROVEMENTS AFFECTED SHALL BE REPLACED TO CITY STANDARDS.
6. WHERE REMAINING PAVEMENT WIDTH FROM THE SAWCUT LINE TO GUTTER, CURB OR EDGE OF PAVEMENT IS LESS THAN 24 INCHES FOR AC OR 36 INCHES FOR PCC, FULL DEPTH PAVEMENT REPAIR SHALL EXTEND TO GUTTER, CURB OR EDGE OF PAVEMENT.
7. BASE SHALL BE CAB OR CMB PER STD. SPECS. (REV. OCTOBER 2008).

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WALNUT VALLEY WATER DISTRICT

TYPICAL BACKFILL AND REPAVEMENT SECTION
WITHIN CITY OF POMONA
(2 OF 3)
0.10' DEEP AC COLD MILL AND OVERLAY WITH "GREENBOOK" CLASS C2-AR-4000 AC OR APPROVED EQUAL (NOT REQUIRED FOR PCC PAVEMENT)

"BUTT" JOINT

3'

VARIES

3'

"BUTT" JOINT

EXISTING PAVEMENT (VARIES IN DEPTH)

EXISTING BASE (VARIES IN DEPTH)

SAWCUT TO A NEAT STRAIGHT LINE (TYPICAL)

12''

NEW PAVEMENT (A)

NEW BASE (B)

TRENCH BACKFILL 90% RELATIVE COMPAC TION

SEE PIPE ZONE TRENCH BACKFILL (STANDARD DRAWING No. 28)

12''

EXISTING PAVEMENT

NEW PAVEMENT

SLIP DOWELS CTR

TRANSVERSE TRENCH PAVEMENT RESTORATION

NOTES:

1. AC SHALL BE B-AR-4000 PER "GREEN BOOK" OR APPROVED EQUAL.
2. WHERE DOWELS ARE REQUIRED, USE #5 AT 36 INCHES ON CENTER ALONG ALL JOINTS.
3. PCC PAVEMENT SHALL HAVE 3 DAY STRENGTH OF 2500 PSI MINIMUM. USE HIGH EARLY STRENGTH CONCRETE ON HIGH TRAFFIC STREETS, IF REQUIRED BY CITY ENGINEER.
4. PCC PAVEMENT PLACEMENT SHALL BE PER APWA STANDARD PLAN 132-1 UNLESS OTHERWISE STATED HERIN.
5. ALL STREET IMPROVEMENTS AFFECTED SHALL BE REPLACED TO CITY STANDARDS.
6. WHERE MULTIPLE NEW TRENCHES OR POTHOLES ARE IN CLOSE PROXIMITY, SLURRY SEAL OF AN EXPANDED AREA MAY BE REQUIRED BY THE CITY ENGINEER INSTEAD OF THE COLD MILL AND OVERLAY. POTHOLES SPACED CLOSER THAN 20 FEET WILL BE CONSIDERED A COMMON TRENCH.
7. BASE SHALL BE CAB OR CMB PER STD. SPECS. (REV. OCTOBER 2008).

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WALNUT VALLEY WATER DISTRICT

TYPICAL BACKFILL AND REPAVEMENT SECTION
WITHIN CITY OF POMONA
(3 OF 3)

APPROVED BY:

DRAWN BY: TDDV
NOTES:
1. FOR CONNECTION TO STEEL PIPE, SEE STANDARD DRAWING NO. 5.
2. FOR DIRECT TAP, SEE STANDARD DRAWING NO. 17.
3. SAMPLING STATIONS SHALL INCLUDE A 30" BURY, WITH A 1" MIP INLET AND A 1" FIP DISCHARGE. A 1/4" BENT-NOSE SAMPLING BIBB SHALL BE LOCATED BEFORE THE DISCHARGE.
4. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NONREMOVABLE, ALUMINUM-CAST HOUSING.
5. 1/2" AND SMALLER SADDLE SHALL BE SINGLE STRAP, LARGER THAN 1/2" SADDLE SHALL BE DOUBLE STRAP
6. SADDLE, CORPORATION STOP, AND COPPER TUBE SHALL BE WRAPPED WITH POLYETHYLENE FILM A MINIMUM OF 3 FEET FROM THE WATER MAIN.
7. ALL TUBING, VALVES AND FITTINGS SHALL BE "LEAD FREE" CONTAINING NO MORE THAN 0.25% OF LEAD CONTENT BY WEIGHT.

WALNUT VALLEY WATER DISTRICT

1" SAMPLING STATION ASSEMBLY

ITEM QUAN. DESCRIPTION
1 1 BRONZE SERVICE SADDLE WITH 1" TAP
2 1 1" BRONZE CORPORATION STOP, M.I.P. X FLARE
3 - 1" COPPER TUBING, TYPE K SOFT
4 1 1" COPPER ELBOW, F.I.P. X FLARE
5 1 1" SAMPLING STATION W/ALUMINUM HOUSING (KUPFERLE FOUNDRY - ECLIPSE No. 88WC)
6 1 ZINC ANODE