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CONSTRUCTION NOTES

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<td>POLYMER CONCRETE METER BOX BY ARMORCAST</td>
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* TO BE PROVIDED BY THE CITY OF ALHAMBRA

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

1" SERVICE CONNECTION

APPROVED: D. P. INMacn 11-30-05

DIRECTOR OF UTILITIES

W-1

DESIGNED: DRB AUG. 2005
DRAWN: DRB AUG. 2005
CHECKED: TLK AUG. 2006

DATE:
AUGUST 2005

SHT. 1 OF 1
CONSTRUCTION NOTES

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CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

1 1/2" SERVICE CONNECTION

REV. No. | DATE | BY APP. | ITEM
---------|------|---------|--------
A        |      |         |        

APPROVED

DIRECTOR OF UTILITIES

DEPUTY DIRECTOR - UTILITIES

CITY ENGINEER

W-2
### CONSTRUCTION NOTES

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**CITY OF ALHAMBRA**  
**DEPARTMENT OF UTILITIES**

**2" SERVICE CONNECTION**

**APPROVED:**

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**DEPUTY DIRECTOR - UTILITIES**

**CITY ENGINEER**

**REV. NO.**  
**BY**  
**DATE**  
**ITEM**  
**SCALE**  
**DATE**  
**DWG. NO.**  
**SHT. 1 OF 1**
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<td>3&quot; FLANGE COUPLING ADAPTER, ROMAC MODEL NO. FCA501</td>
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<td>19</td>
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*TO BE PROVIDED BY THE CITY OF ALHAMBRA*

**UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:**

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.

2. THE VAULT COVER SHALL HAVE AT LEAST 3 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.

3. ALL BOLTS SHALL BE STAINLESS STEEL.

4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES. GATE VALVES UNDER 4" IN SIZE SHALL BE PER AWWA C500-LATEST EDITION. ALL 3" VALVES OR LARGER WHICH ARE LOCATED INSIDE THE VAULT, SHALL BE EQUIPPED WITH A HANDWHEEL.

5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.

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**CITY OF ALHAMBRA**

**DEPARTMENT OF UTILITIES**

**3" SERVICE CONNECTION WITH 2" METERED BY-PASS**

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**APPROVED:**

DEPUTY DIRECTOR - UTILITIES

CITY ENGINEER

---

**DIRECTOR OF UTILITIES**

**DESIGNED**

**DRAWN**

**CHECKED**

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**CHECKED**

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<td>4&quot; FLANGE COUPLING ADAPTER, ROMAC MODEL NO. FCA501</td>
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<td>4&quot; RESILIENT WEDGE GATE VALVE, FLGxFLG, WITH VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8.</td>
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<td>8&quot; DIA. x 6&quot; WALL SLEEVE W/ WATER STOP NON-SHRINK WATER TIGHT CAULKING</td>
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---

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

4" SERVICE CONNECTION WITH 2" METERED BY-PASS

DEPUTY DIRECTOR - UTILITIES
CITY ENGINEER

APPROVED:  

DIRECTOR OF UTILITIES

DESIGNED: DRB  
DRAWN: DRB  
CHECKED: TLK

W-5

REV. No.  DATE  BY/APP.  ITEM
APPROVED:  

SIGNATURE  DATE

DEPUTY DIRECTOR - UTILITIES
CITY ENGINEER

SHT. 2 OF 2
CITY OF ALHAMBRA

DEPARTMENT OF UTILITIES

6" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS

METER OPERATING RANGE: 30 TO 2000 GPM

PLAN VIEW

ELEVATION VIEW

12" C.A.B. COMPACTED TO 90% RELATIVE DENSITY

PIPE SIZE x 6" D.I. TEE, M.J./FLG. w/GLASS BLOCK PER STD. DWG. NO. W-13

VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8

6" D.I. PIPE, CLASS 350

6" D.I. PIPE, CLASS 350

VALVE COVER ASSEMBLY PER STD. DWG. NO. W-8
## CONSTRUCTION NOTES

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<td>4' FLANGE COUPLING ADAPTER, ROMAC FCA501</td>
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<td>6' FLANGE COUPLING ADAPTER, ROMAC FCA501</td>
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<tr>
<td>10</td>
<td>4&quot;×5&quot;×47&quot; DEEP PARKWAY WATER VAULT WITH COVER DESIGNED FOR PARKWAY LOADING, JENSEN PRECAST MODEL NO. K45-FH48-08P.</td>
</tr>
<tr>
<td>11</td>
<td>10&quot; DIA. x 5&quot; WALL SLEEVE w/ WATER STOP NON-SHRINK WATER TIGHT CAULKING</td>
</tr>
<tr>
<td>12</td>
<td>ADJUSTABLE PIPE SUPPORT PER STD. DWG. NO. W-19</td>
</tr>
<tr>
<td>13</td>
<td>18&quot; SQUARE x 18&quot; DEEP CONCRETE PEDESTAL FOR PIPE SUPPORT.</td>
</tr>
</tbody>
</table>

UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.

2. THE VAULT COVER SHALL HAVE AT LEAST 2 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.

3. ALL BOLTS SHALL BE STAINLESS STEEL.

4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES.

5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.

---

**CITY OF ALHAMBRA**

**DEPARTMENT OF UTILITIES**

**6" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS**

**APPROVED**: [Signature]

**DEPUTY DIRECTOR - UTILITIES**: [Signature]

**CITY ENGINEER**: [Signature]

**DIRECTOR OF UTILITIES**: [Signature]

**DESIGNED**: [Signature]  [Date: Aug. 2006]

**DRAWN**: [Signature]  [Date: Aug. 2006]

**CHECKED**: [Signature]  [Date: Aug. 2006]

**REV. No.** | **DATE** | **BY/APP.** | **ITEM**
---|---|---|---
**APPROVED**: | | | |

**W-6**

**SCALE**: As Shown

**DRAWN**

**CHECKED**

**DESIGNED**

**DATE**: AUGUST 2005

**SHT. 2 OF 2**
PLAN VIEW

ELEVATION VIEW

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

8" SERVICE CONNECTION WITH 4" D.I.P. BY-PASS

METER OPERATING RANGE: 35 TO 3500 GPM
**CONSTRUCTION NOTES**

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8&quot; METER, FLGxFLG (METER SHALL BE SUPPLIED WITH STRAINER), SENSUS W-3500 DR OR NEPTUNE HP TURBINE</td>
</tr>
<tr>
<td>2</td>
<td>4&quot; RESILIENT WEDGE GATE VALVE, FLGxFLG, w/ VALVE COVER ASSEMBLY PER STD. DWG. NO. W-3.</td>
</tr>
<tr>
<td>3</td>
<td>8&quot; RESILIENT WEDGE GATE VALVE, FLGxFLG, w/ VALVE COVER ASSEMBLY PER STD. DWG. NO. W-3.</td>
</tr>
<tr>
<td>4</td>
<td>4&quot; FLANGE COUPLING ADAPTER, ROMAC FCA501.</td>
</tr>
<tr>
<td>5</td>
<td>8&quot; FLANGE COUPLING ADAPTER, ROMAC FCA501.</td>
</tr>
<tr>
<td>6</td>
<td>8&quot;x8&quot;x4&quot; D.I. TEE, FLGxFLGxFLG</td>
</tr>
<tr>
<td>7</td>
<td>4&quot; - 90° D.I. BEND, MJ/MJ</td>
</tr>
<tr>
<td>8</td>
<td>4&quot; DUCTILE IRON SPOOL, CLASS 350, PExPE</td>
</tr>
<tr>
<td>9</td>
<td>8&quot; DUCTILE IRON SPOOL, CLASS 350, FLGxPE</td>
</tr>
<tr>
<td>10</td>
<td>4x5x47&quot; DEEP PARKWAY WATER VAULT WITH COVER DESIGNED FOR PARKWAY LOADING, JENSEN PRECAST MODEL NO. K45-FH48-08P.</td>
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<td>18&quot; SQUARE x 18&quot; DEEP CONCRETE PEDESTAL FOR PIPE SUPPORT.</td>
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</tbody>
</table>

**UNLESS OTHERWISE SPECIFIED ON PLANS OR CALLED FOR IN THE SPECIFICATIONS:**

1. ANY CHANGES TO STANDARD MUST BE APPROVED BY THE CITY ENGINEER.

2. THE VAULT COVER SHALL HAVE AT LEAST 2 PLATES WITH FLUSH LIFT HANDLES AND BOLT DOWN FEATURES. THE COVER SHALL BE DESIGNED FOR TRAFFIC LOADING IF LOCATED IN AREA WITH TRAFFIC ACCESS. COVER SHALL BE SUPPORTED BY REMOVABLE BEAMS. METER READING LID SHALL BE PROVIDED CENTERED OVER THE METER REGISTER. EACH READING LID SHALL BE FLUSH MOUNT, RECTANGULAR IN SHAPE AND HINGED.

3. ALL BOLTS SHALL BE STAINLESS STEEL.

4. GATE VALVES 4" IN SIZE AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES.

5. ALL VAULTS SHALL BE EQUIPPED WITH A PRECAST CONCRETE FLOOR, SUMP WITH GRATE, AND 1 C.F. OF 3/4" GRAVEL BELOW SUMP.
CAST IRON COVER MARKED "WATER"
(ALHAMBRA FDY.
PLATE NO. A-29668)

PLAN

GALVANIZED SPLIT SLEEVE,
18 GA. x 18" LONG MIN.

2" SQ. OPERATING NUT

VALVE STEM EXTENSION,
1 1/4" STEEL ROD
CENTER AND PLUMB
OVER OPERATING NUT

IF DEPTH EXCEEDS 3'-0"
PROVIDE STEM EXTENSION
TO 24" BELOW FINISHED SURFACE (MIN.)

6" DIA. x 1/4" SOLID DISK,
TACK WELD TO
SHAFT EXTENSION

8 5/8" O.D. GALVANIZED SLEEVE

ADAPT TO OPERATING
NUT ON VALVE, FASTEN
WITH PIN

RESILIENT WEDGE GATE VALVE
PER AWWA C-509-LATEST EDITION

2" x 4" REDWOOD BLOCKS, 12" LONG.
PLACE ON TOP OF VALVE

ANCHOR BARS PER
STD. DWG. NO. W-13

THRUSS BLOCK PER STD. NO. W-13

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

GATE VALVE AND VALVE COVER ASSEMBLY

REV. No. | DATE | BY/APP. | ITEM
---|---|---|---
| | | |

APPROVED:

DIRECTOR OF UTILITIES

W-8

DATE

SCALE: AS SHOWN

DRAWN

CHECKED

DESIGNED

DRAWN

CHECKED

DESIGNED

DRAWN

CHECKED

DEPUTY DIRECTOR - UTILITIES

CITY ENGINEER

43246

9/2/05

RCE No.

DATE

11-30-05

W-8

SHT. 1 OF 1
CONSTRUCTION NOTES

<table>
<thead>
<tr>
<th>NO</th>
<th>DESCRIPTION</th>
<th>JAMES JONES</th>
<th>CAMBRIDGE BRASS</th>
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<tbody>
<tr>
<td>1</td>
<td>DOUBLE STRAP SERVICE SADDLE WITH 2&quot; TAP</td>
<td>J-979</td>
<td>SERIES 810</td>
</tr>
<tr>
<td>2</td>
<td>2&quot; QUARTER BEND COUPLING, COMP. x COMP.</td>
<td>J-2611</td>
<td>105-H7H7</td>
</tr>
<tr>
<td>3</td>
<td>2&quot; CORPORATION MAIN STOP, M.I.P. x COMP.</td>
<td>J-1935SG</td>
<td>301-M7H7</td>
</tr>
</tbody>
</table>

NOTES

1. A BLOW-OFF HYDRANT SHALL BE INSTALLED IN CUL-DE-SAC STREETS GREATER THAN 200 FEET IN LENGTH OR THOSE CUL-DE-SACS WITHOUT A FIRE HYDRANT AT THE END OF THE STREET.

2. FULL SIZE MAIN SHALL CONTINUE AT LEAST TO THE CENTER OF THE CUL-DE-SAC.

3. NO HOUSE SERVICE CONNECTIONS WILL BE ALLOWED ON THE 2" PIPE. THE BLOW-OFF HYDRANT SHALL BE LOCATED ON THE PROJECTION OF A LOT LINE.

4. FOR PIPE SIZES LARGER THAN 12" USE FORD STEEL END CAP COUPLING, STYLE FC4.
CONSTRUCTION NOTES

1. DOUBLE STRAP SADDLE, JAMES JONES J-979 OR CAMBRIDGE BRASS SERIES 810.
2. CORPORATION STOP, MPxCOMP., JAMES JONES J-1935SSG OR CAMBRIDGE BRASS 301-M4H4.
3. "K" COPPER TUBING
4. ANGLE INVERTED KEY METER VALVE, COMP.,x SWIVEL NUT, JAMES JONES J-193WSS OR CAMBRIDGE BRASS 210-H474.
6. "K" AIR / VACUUM RELEASE VALVE, APCO MODEL 142 OR APPROVED EQUAL.
7. METER BOX, 9 1/2"x 16" WITH HEAVY DUTY COVER, BROOKS PRODUCT 3 SERIES.
8. 2-6"x2-6"x5" THICK CONCRETE PAD (520-C2500 PCC PER S.S.P.W.C.)
9. ANCHOR BOLTS TO BE PROVIDED BY UTILITIES DEPARTMENT.
10. 1"x3" LONG BRASS NIPPLE, M.I.P.xM.I.P.
11. 1" - 90° BRASS ELL, F.I.P.xF.I.P.
12. 1"x6" LONG BRASS NIPPLE, M.I.P.xM.I.P.

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

1" AIR / VACUUM VALVE RELEASE ASSEMBLY

APPROVED:

DIRECTOR OF UTILITIES

DESIGNED:

DRAWN:

CHECKED:

2006-08-29 9-21-05
UNLESS OTHERWISE SPECIFIED ON PLANS:

LOCATION:

OF STREET

24"

OF STREET

AIR / VACUUM VALVE ASSEMBLY

SHUT OFF VALVE & METER BOX WITH HEAVY DUTY COVER

Curb Face

BACK OF CURB

UNIMPROVED AREA

IMPROVED AREA

GENERAL NOTES

1. AIR RELEASE VALVE ASSEMBLIES INSTALLED IN EASEMENTS, ROADS AND STREETS WITHOUT CURBS SHALL BE PROTECTED BY TWO GUARD POSTS. POSITION GUARD POSTS 24" IN FRONT OF AND 30" EACH SIDE OF AIR RELEASE VALVE ASSEMBLY.

2. PIPING SHALL BE INSTALLED PRIOR TO STREET PAVING.

3. NO CONNECTION OR TAP SHALL BE PLACED LESS THAN 24" FROM A VALVE, JOINT OR ADJACENT CONNECTION.

4. SET PORTLAND CEMENT CONCRETE PAD 4" ABOVE GRADE IN UNIMPROVED AREAS.
INSTALL 6" FIRE HYDRANT, LONG BEACH IRON B-130 OR JAMES JONES J-3765 WET BARREL. PAINT THE EXTERIOR WITH (2) COATS OF RED PRIMER, RUST-O-LEUM NO. 769 AND FINISH WITH (1) COAT OF YELLOW, RUST-O-LEUM NO. 659.

NOTE:
4 BARRIER POSTS SHALL BE INSTALLED PER STANDARD DRAWING W-12 ON ALL FIRE HYDRANT THAT IS NOT INSTALLED BEHIND 6" MINIMUM HEIGHT CURB.
NOTE:
INSTALL POLYETHYLENE GUARDIAN SLEEVE, MODEL NO. P6000460-YLW, OVER 4" GALVANIZED STEEL PIPE.
### Thrust Bearing Area (Square Feet)

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Pressure (psi)</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Bends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90°</td>
<td>4.0</td>
<td>7.1</td>
<td>11.1</td>
<td>16.0</td>
</tr>
<tr>
<td>45°</td>
<td>2.2</td>
<td>3.8</td>
<td>6.0</td>
<td>8.7</td>
</tr>
<tr>
<td>22.5°</td>
<td>2.0</td>
<td>2.0</td>
<td>3.1</td>
<td>4.4</td>
</tr>
<tr>
<td>11.25°</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.2</td>
</tr>
<tr>
<td>Plug</td>
<td>5.7</td>
<td>10.1</td>
<td>15.7</td>
<td>22.6</td>
</tr>
<tr>
<td>Tee/Valve</td>
<td>2.8</td>
<td>5.0</td>
<td>7.9</td>
<td>11.3</td>
</tr>
<tr>
<td>Cross *</td>
<td>2.8</td>
<td>5.0</td>
<td>7.9</td>
<td>11.3</td>
</tr>
<tr>
<td>Reducer</td>
<td>2.0</td>
<td>4.0</td>
<td>7.0</td>
<td>10.0</td>
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</table>

*With a valve

### Vertical Anchor (Cubic Feet of P.C.C.)

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
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<tbody>
<tr>
<td>Test Pressure (psi)</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Bends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90°</td>
<td>62</td>
<td>111</td>
<td>173</td>
<td>249</td>
</tr>
<tr>
<td>45°</td>
<td>44</td>
<td>78</td>
<td>122</td>
<td>176</td>
</tr>
<tr>
<td>22.5°</td>
<td>24</td>
<td>42</td>
<td>66</td>
<td>95</td>
</tr>
<tr>
<td>11.25°</td>
<td>12</td>
<td>22</td>
<td>34</td>
<td>49</td>
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</tbody>
</table>

### Notes:
1. Thrust blocks must bear on undisturbed soil.
2. Concrete for thrust & anchor blocks shall be of Class 480-C-2000 in accordance with S.S.P.W.C. It shall be poured (12" thick min.) against undisturbed soil. P.C.C. shall be kept clear of pipe & bell of the fittings.
3. When mechanical joints are utilized, set forms to separate bolts from P.C.C. to assure access to bolts & joints.

---

### City of Alhambra

**Department of Utilities**

**Thrust Blocks**

<table>
<thead>
<tr>
<th>REV. No.</th>
<th>DATE</th>
<th>BY/APP.</th>
<th>ITEM</th>
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**Approved:**

**Director of Utilities:**

<table>
<thead>
<tr>
<th>By</th>
<th>Date</th>
<th>Scale</th>
<th>DWG No.</th>
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<tr>
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<td>W-13</td>
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**Designed:**

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<th>By/Drawn</th>
<th>Date</th>
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<tr>
<td>DRB</td>
<td>AUG 2006</td>
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**Made:**

<table>
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<th>By/CHECKED</th>
<th>Date</th>
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<tr>
<td>TLK</td>
<td>AUG 2006</td>
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**City Engineer:**

<table>
<thead>
<tr>
<th>RCN No.</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCE No.</td>
<td></td>
</tr>
</tbody>
</table>
NOTES:

1. THE LENGTH OF THE ENCASEMENT SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS.

2. PERPENDICULAR CROSSINGS OF WATER AND SEWER PIPELINES SHALL BE PER CALIFORNIA DEPARTMENT OF HEALTH SERVICES, "CRITERIA FOR THE SEPARATION OF WATER MAIN AND SANITARY SEWER".

3. V.C.P. SEWER PIPE SHALL BE WRAPPED WITH POLYETHYLENE MATERIAL PRIOR TO BEING ENCASED IN CONCRETE.
NOTE:

*USE CLEAN POTABLE-WATER HOSE ONLY. THIS HOSE MUST BE REMOVED DURING THE HYDROSTATIC PRESSURE TEST. (SEE TABLE ON SHEET 2 FOR NUMBER OF TAPS AND SIZES REQUIRED).

**CITY BACKFLOW INSPECTOR SHALL SPECIFY TYPE AND MAKE.
SMOOTH, UNEVENTHED, 1/2" BRASS HOSE BIB FOR BACTERIA SAMPLES

NEW WATER MAIN

CONTROL VALVE

PIPE DIAMETER
in.

FLOW REQUIRED TO PRODUCE 2.5 ft/s (APPROX) VELOCITY IN MAIN gpm

SIZE OF TAP, in.

NUMBER OF TAPS ON PIPE

NUMBER OF 2 1/2 INCH HYDRANT OUTLETS

<table>
<thead>
<tr>
<th>PIPE DIAMETER in.</th>
<th>FLOW REQUIRED TO PRODUCE 2.5 ft/s (APPROX) VELOCITY IN MAIN gpm</th>
<th>SIZE OF TAP, in.</th>
<th>NUMBER OF TAPS ON PIPE</th>
<th>NUMBER OF 2 1/2 INCH HYDRANT OUTLETS</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>100</td>
<td>1</td>
<td>1</td>
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<tr>
<td>6</td>
<td>200</td>
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<td>1</td>
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<td>8</td>
<td>400</td>
<td>1 1/2</td>
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<td>1</td>
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<tr>
<td>10</td>
<td>600</td>
<td>1 1/2</td>
<td>3</td>
<td>2</td>
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<tr>
<td>12</td>
<td>900</td>
<td>1 1/2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>1600</td>
<td>1 1/2</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES
TEMPORARY FLUSH ASSEMBLY

REV. No. | DATE | BY/APP. | ITEM
--|------|--------|---
|      |      |        | |

APPROVED: |

DIRECTOR OF UTILITIES |
DESIGNED | DRAWN | CHECKED | DATE | SCALE |
---|---|---|---|---|---|
DRB | DRB | TLK | AUG. 2005 | AS SHOWN |

DEPUTY DIRECTOR - UTILITIES |

CITY ENGINEER |
RCE No. | DATE
---|---

W-15
SHT. 2 OF 2
CONSTRUCT MIN. A.C. 1" THICKER THAN EXISTING OVER 6" C.A.B. (MIN.)

SAWCUT EDGE OF TRENCH

EXIST. A.C. OVER C.A.B. (THICKNESS VARIES)

PAYMENT LIMIT

ADDITIONAL PAYMENT WHERE INDICATED ON PLAN

REPLACE EXIST. CURB AND GUTTER

C.A.B COMPACTED TO 95% OF THE RELATIVE DENSITY

BEDDING AND BACKFILL SHALL BE FREE DRAINING GRANULAR MATERIAL HAVING A SAND EQUIVALENT OF NOT LESS THAN 30 AND SHALL BE COMPACTED TO 95% RELATIVE DENSITY BY WATER DENSIFICATION METHODS.

PIPE SIZE | 4" | 6" | 8" | 10" | 12" | 16" | 20" | 24" | 30"
---|---|---|---|---|---|---|---|---|---
MAXIMUM ALLOWED TRENCH WIDTH | 20" | 20" | 20" | 22" | 24" | 28" | 32" | 36" | 42"

NOTE:
*DEPTH OF COVER SHALL BE 36" ON 4" DIA. THROUGH 8" DIA. PIPE ON RESIDENTIAL STREETS.
*DEPTH OF COVER SHALL BE 42" ON 12" DIA. AND LARGER PIPE ON ARTERIAL STREETS.
CITY TO PROVIDE HEAVY CHAINS, LOCKS, AND KEYS TO LOCK HANDWHEELS

DOUBLE CHECK DETECTOR ASSEMBLY w/ DETECTOR BYPASS. METER SHALL READ IN CUBIC FEET.

VALVE BOX ASSEMBLY PER STD. DWG. W-3

R.W. GATE VALVE FLG.xFLG.

PROPERTY LINE, EASEMENT LINE OR R/W LINE

D.I. PIPE, CLASS 350 FLANGE FITTINGS

90° BEND, MJxMJ w/ LOCKING RESTRAINTS AND THRUST BLOCK PER STD. DWG. W-13

FINISHED GRADE

D.I. PIPE SIZE AND TYPE TO BE DETERMINED BY THE CITY ENGINEER

NOTE: ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE ONE COAT OF RED LEAD PRIMER AND TWO FINISHING COATS OF ENAMEL PAINT (COLOR SHALL BE DETERMINED BY THE CITY).

SECTIONAL VIEW

M.J. TEE WITH FLANGED OUTLET

WATER MAIN

PLAN VIEW

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>D.C.D.A. LENGTH (A)</th>
<th>MIN. / MAX. FLOW</th>
<th>HERSEY/GRINNEL MODEL O.A.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; x 3/4&quot;</td>
<td>40 5/8&quot;</td>
<td>100 - 320 GPM</td>
<td>MODEL DDC II</td>
</tr>
<tr>
<td>4&quot; x 3/4&quot;</td>
<td>47 1/2&quot;</td>
<td>200 - 500 GPM</td>
<td>MODEL DDC II</td>
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<tr>
<td>6&quot; x 3/4&quot;</td>
<td>62&quot;</td>
<td>200 - 1000 GPM</td>
<td>MODEL DDC II</td>
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<tr>
<td>8&quot; x 3/4&quot;</td>
<td>75 1/2&quot;</td>
<td>400 - 1600 GPM</td>
<td>MODEL DDC II</td>
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<td>10&quot; x 3/4&quot;</td>
<td>88&quot;</td>
<td>800 - 2300 GPM</td>
<td>MODEL DDC II</td>
</tr>
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CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

DOUBLE CHECK DETECTOR ASSEMBLY

REV. No. DATE BYAPP. ITEM

APPROVED: [Signature] 11-30-65

DIRECTOR OF UTILITIES

DESIGNED DR8 DATE SCALE: AS SHOWN

DRAWN DR8 DATE: AUGUST 2005

CHECKED TLK DATE: AUG. 2005

DWG. No. W-17

SHT. 1 OF 1
CITY TO PROVIDE HEAVY CHAINS, LOCKS AND KEYS TO LOCK HANDWHEELS

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY

D.I. PIPE, CLASS 350 FLANGE FITTINGS

NOTE:
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE ONE COAT OF RED LEAD PRIMER AND TWO FINISHING COATS OF ENAMEL PAINT (COLOR SHALL BE DETERMINED BY THE CITY).

SECTIONAL VIEW

PROPERTY LINE, EASEMENT LINE OR RIGHT-OF-WAY LINE

PLANT VIEW

SERVICE | R.P.B.P. LENGTH (A) | MIN./MAX. FLOW | HERSEY/GRINNELL MODEL O.A.E.
---|---|---|---
3" | 40" (BRAZON) | 200 - 320 GPM | MODEL 6CM
4" | 46 1/2" (BRAZON) | 200 - 500 GPM | MODEL 6CM
6" | 62" (BRAZON) | 400 - 1000 GPM | MODEL 6CM
8" | 75 1/2" (IRON) | 800 - 1600 GPM | MODEL 6CM
10" | 88" (IRON) | 800 - 2300 GPM | MODEL 6CM

CITY OF ALHAMBRA
DEPARTMENT OF UTILITIES

REDCEDD PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY

APPROVED:

DIRECTOR OF UTILITIES

DESIGNED BY | DATE
---|---
DRB | AUG. 2005

DRAWN BY | DATE
---|---
DRB | AUG. 2005

CHECKED BY | DATE
---|---
TLK | AUG. 2005

W-18
SHT. 1 OF 1
PLAN VIEW
NOT TO SCALE

DETAIL "A"
NOT TO SCALE

PROFILE VIEW
NOT TO SCALE

A) SQUARE STEEL PLATE 12" x 12" x 0.375" THICK.
B) BLACK STEEL PIPE SUPPORT TUBE. 2.5" DIA x 14" LONG x 0.375" WALL THICKNESS.
C) STAINLESS STEEL (316 ALLOY) ALL THREAD ROD. 2.0" DIA x 18" LONG. TACK WELD TO TOP HEX NUT.
D) HEAVY HEX HEAD STEEL (304 ALLOY) NUT.
E) SADDLE SUPPORT. STEEL PIPE BENT OPEN TO ACCOMMODATE SAME SIZE PIPE OR ROLLED STEEL FLAT BAR TO MATCH SUPPORTED PIPE OF FITTING FLANGE O.D. 3" MIN. WIDTH x 12" ROLLED LENGTH. FILLET WELD HEX NUT TO BOTTOM OF SADDLE SUPPORT.
F) INSTALL BASE PLATE ON LEVELING COURSE OF HIGH STRENGTH EPOXY CEMENT COMPOUND.
G) COAT THREADS WITH LIBERAL AMOUNT OF ANTI-CEASE COMPOUND.
H) DRILL CONCRETE PAD OR VAULT FLOOR AND MOUNT BASE PLATE WITH 4 EACH. 1/2" STAINLESS STEEL CONCRETE ANCHOR BOLTS. SEE BASE PLATE TEMPLATE.
I) TIGHTEN DOUBLE HEX NUTS SNUG AGAINST SUPPORT TUBE. USE 60 FT. LBS. TORQUE.
J) TACK WELD ALL THREAD ROD TO HEAVY HEX NUT UNDER SUPPORT SADDLE.
K) RED HEAD STAINLESS STEEL CONCRETE ANCHOR BOLT. 1/2" DIA x 4" LONG.
L) 1/2" STAINLESS STEEL HEX ANCHOR NUT. RED HEAD OR APPROVED EQUAL.
M) 1" x 1/2" HEAVY STAINLESS STEEL WASHERS. DOUBLE STACK ON TOP OF SUPPORT PLATE.
CUT-IN TEE CONNECTION DETAIL

EXIST. WATER LINE

18" MIN.

TRANSITION COUPLING

D.I. SPOOL, PE x PE

TEE, MJ x MJ x FLG

INSTALL R.W. GATE VALVE, FLG x FLG, PER
STD. DWG. NO. W-8

18" MIN.

TRANSITION COUPLING

D.I. SPOOL, PE x PE

EXIST. WATER LINE

INSTALL THRUST BLOCK PER
STD. DWG. NO. W-13

TAPPING SLEEVE AND TAPPING VALVE CONNECTION DETAIL

EXIST. WATER LINE

TAPPING VALVE, FLG x MJ

TAPPING SLEEVE WITH FLANGE OUTLET

EXIST. WATER LINE

INSTALL THRUST BLOCK PER
STD. DWG. NO. W-13

CITY OF ALHAMBRA

DEPARTMENT OF UTILITIES

CONNECTION TO EXISTING MAIN LINES

APPROVED:  

DEPUTY DIRECTOR - UTILITIES

CITY ENGINEER

REV. No.  DATE  BY/APP.  ITEM

APPROVER:  

DIRECTOR OF UTILITIES

DESIGNED  BY  DATE  SCALE:  AS SHOWN  DWG. No.

DRAWN  DATE  AUGUST 2005

CHECKED  DATE  AUG. 2005

43296  DATE

SHT. 1 OF 1

W-20
**PARALLEL CONSTRUCTION**

- **ZONE A**
  - Special Construction Required For Water Main
  - No water mains parallel to sanitary sewer mains shall be constructed without prior written approval from the Department of Health Services.

- **ZONE B**
  - Special Pipe

- **ZONE C**
  - Special Permission

- **ZONE D**
  - No joints in water main

- **ZONE P**
  - Prohibited

**PERPENDICULAR CONSTRUCTION**

- **ZONE D**
  - No joints in water main

- **ZONE P**
  - Prohibited

- **ZONE C**
  - Special Water Pipe
  - (No joints in water main)

**NOTE**: ZONE IDENTICAL ON EITHER SIDE OF CENTER LINES.

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**ZONE SPECIAL CONSTRUCTION REQUIRED FOR WATER MAIN**

**A**

- No water mains parallel to sanitary sewer mains shall be constructed without prior written approval from the Department of Health Services.

**B**

- The water main should be constructed of one of the following:
  - Ductile iron pipe with hot dip bituminous coating;
  - HDPE pipe with fusion welded joints (per AWWA C906-Latest Edition);
  - Dipped and wrapped one-fourth-inch thick welded steel pipe;
  - Class 200, Type II Asbestos-Cement pressure pipe;
  - Class 200 Pressure Rated PVC Water Pipe (Dr 14 per AWWA C900-Latest Edition);
  - Reinforced Concrete Pressure Pipe, Steel Cylinder, per AWWA (C300 or C302 or C303 - Latest Edition).

**C**

- The water main should have no joints in Zone C and be constructed of one of the following:
  - Ductile iron pipe with hot dip bituminous coating;
  - HDPE pipe with fusion welded joints (per AWWA C906-Latest Edition);
  - Dipped and wrapped one-fourth-inch thick welded steel pipe;
  - Class 200 Pressure Rated PVC Water Pipe (Dr 14 per AWWA C900-Latest Edition);
  - Reinforced Concrete Pressure Pipe, Steel Cylinder, per AWWA (C300 or C302 or C303 - Latest Edition).

**D**

- The water main should have no joints within four feet from either side of the sanitary sewer main and should be constructed as for Zone C.

**P**

- Is a prohibited zone, section 64630 (e) (2) California Administrative Code, Title 22.

**ADDITIONAL NOTES:**

1. Water mains and sewer lines must not be installed in the same trench.

2. Separation distances specified shall be measured from the nearest edge of facilities.

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**CITY OF ALHAMBRA**

**DEPARTMENT OF UTILITIES**

**CONSTRUCTION ZONES - NEW WATER MAIN**

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**APPROVED:**

- **DEPUTY DIRECTOR - UTILITIES**
  - **DATE**
  - **SIGNATURE**

- **CITY ENGINEER**
  - **RCE No.**
  - **DATE**
  - **SIGNATURE**

**DIRECTOR OF UTILITIES**

- **DATE**
- **SIGNATURE**

**DESIGNED**

- **DRB**
  - **DATE**

**DRAWN**

- **DRB**
  - **DATE**

**CHECKED**

- **TLK**
  - **DATE**

**SCALE:** AS SHOWN

**DRAWG. No.:** W-21

**SHT. 1 OF 1**
ZONE SPECIAL CONSTRUCTION REQUIRED FOR WATER MAIN

A
SANITARY SEWER MAINS PARALLEL TO WATER MAINS SHALL NOT BE PERMITTED IN THIS ZONE WITHOUT PRIOR WRITTEN APPROVAL FROM THE DEPARTMENT OF HEALTH SERVICES AND PUBLIC WATER SYSTEM.

B
THE SANITARY SEWER MAIN SHOULD BE CONSTRUCTED OF ONE OF THE FOLLOWING:
   a) HIGH-DENSITY POLYETHYLENE (HDPE) PIPE WITH FUSION WELDED JOINTS (PER AWWA C906-LATEST EDITION);
   b) EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS;
   c) CLASS 4000, TYPE II ASBESTOS CEMENT PIPE WITH RUBBER GASKET JOINTS;
   d) PVC SEWER PIPE WITH RUBBER RING JOINTS (PER ASTM D3034) OR EQUIVALENT;
   e) CAST OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS; OR
   f) REINFORCED CONCRETE PRESSURE PIPE WITH COMPRESSION JOINTS (PER AWWA C302-LATEST EDITION).

C
THE SANITARY SEWER MAIN SHOULD HAVE NO JOINTS IN ZONE C AND BE CONSTRUCTED OF ONE OF THE FOLLOWING:
   a) HDPE PIPE WITH FUSION-WELDED JOINTS (PER AWWA C906 LATEST EDITION);
   b) DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING AND MECHANICAL JOINTS (GASKETED, BOLTED JOINTS);
   c) A CONTINUOUS SECTION OF CLASS 200 (DR 14 PER AWWA C900-LATEST EDITION) PVC PIPE OR EQUIVALENT, CENTERED OVER THE PIPE BEING CROSSED;
   d) A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-LATEST EDITION) CENTERED OVER THE PIPE BEING CROSSED; OR
   e) ANY SANITARY SEWER MAIN WITHIN A CONTINUOUS SLEEVE.

D
THE SANITARY SEWER MAIN SHOULD HAVE NO JOINTS WITHIN FOUR FEET FROM EITHER SIDE OF THE WATER MAIN AND SHOULD BE CONSTRUCTED OF ONE OF THE FOLLOWING:
   a) A CONTINUOUS SECTION OF DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING; OR
   b) ONE OF THE ZONE C OPTIONS a), c), d), or e) ABOVE.

P
ZONES "P" IS A PROHIBITED ZONE; SECTION 64630 (e) (2) CALIFORNIA ADMINISTRATIVE CODE, TITLE 22.

ADDITIONAL NOTES:
1. WATER MAINS AND SEWER LINES MUST NOT BE INSTALLED IN THE SAME TRENCH.
2. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.