### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW1</td>
<td>1-Inch Recycled Water Service</td>
</tr>
<tr>
<td>RW2</td>
<td>1-1/2-Inch Recycled Water Service <em>(Not Recommended)</em></td>
</tr>
<tr>
<td>RW3</td>
<td>2-Inch Recycled Water Service</td>
</tr>
<tr>
<td>RW4</td>
<td>3 and 4-Inch Recycled Water Service</td>
</tr>
<tr>
<td>RW5</td>
<td>6, 8 and 10-Inch Recycled Water Service</td>
</tr>
<tr>
<td>RW6</td>
<td>Tapping of PVC or DIP Mains</td>
</tr>
<tr>
<td>RW6A</td>
<td>Tapping of Steel Mains (CML&amp;C Steel Pipe)</td>
</tr>
<tr>
<td>RW7</td>
<td>Butterfly Valve, Valve Box and Cover</td>
</tr>
<tr>
<td>RW7A</td>
<td>Gate Valve, Valve Box and Cover</td>
</tr>
<tr>
<td>RW8</td>
<td>Valve Stem Extension</td>
</tr>
<tr>
<td>RW9</td>
<td>1-Inch and 2-Inch Combination Air Valve Assembly</td>
</tr>
<tr>
<td>RW10</td>
<td>Recycled Water Sampling Station</td>
</tr>
<tr>
<td>RW11</td>
<td>Temporary Test Bulkhead Detail (DIP/PVC)</td>
</tr>
<tr>
<td>RW12</td>
<td>Dead End with Permanent 2-Inch Blow-off</td>
</tr>
<tr>
<td>RW13</td>
<td>4-Inch Blow-off</td>
</tr>
<tr>
<td>RW14</td>
<td>Retaining Wall Detail</td>
</tr>
<tr>
<td>RW15</td>
<td>Recycled Water Pipe Identification</td>
</tr>
<tr>
<td>RW16</td>
<td>Warning Tags and Tape</td>
</tr>
<tr>
<td>RW17</td>
<td>Pipe Zone and Bedding</td>
</tr>
<tr>
<td>RW18</td>
<td>Trench and Paving Section</td>
</tr>
<tr>
<td>RW19</td>
<td>Typical Thrust Blocks</td>
</tr>
<tr>
<td>RW20</td>
<td>Steel Casing Pipe</td>
</tr>
<tr>
<td>RW21</td>
<td>Criteria for the Separation of Water Mains from Recycled Water Mains</td>
</tr>
<tr>
<td>RW22</td>
<td>Double Check and Reduced Pressure Backflow Assembly</td>
</tr>
<tr>
<td>RW23</td>
<td>Blanket Protection for Pipes</td>
</tr>
<tr>
<td>RW24</td>
<td>Concrete Saddle for Existing PipesCrossed under New Pipe</td>
</tr>
<tr>
<td>RW25</td>
<td>Concrete Encasement</td>
</tr>
<tr>
<td>RW26</td>
<td>Guard Post</td>
</tr>
<tr>
<td>RW27</td>
<td>Sign Post</td>
</tr>
<tr>
<td>RW28</td>
<td>Marker Post</td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW29</td>
<td>Pipe Support and Dimension Table</td>
</tr>
<tr>
<td>RW30</td>
<td>Water Main Vertical Offset</td>
</tr>
<tr>
<td>RW31</td>
<td>Cut/Cap and Plug Installation; Tie-in Connection Installation</td>
</tr>
<tr>
<td>RW32</td>
<td>Slope Anchors</td>
</tr>
<tr>
<td>RW33</td>
<td>Cut-in Tee</td>
</tr>
<tr>
<td>RW34</td>
<td>Pipe Plug Detail; Abandoned Storm Drain</td>
</tr>
<tr>
<td>RW35</td>
<td>Butt Strap Joint for CML&amp;C Steel Pipe</td>
</tr>
<tr>
<td>RW36</td>
<td>4- to 12-inch Outlet Detail for CML&amp;C Steel Pipe</td>
</tr>
<tr>
<td>RW37</td>
<td>Standard Tap to CML&amp;C Steel Main</td>
</tr>
<tr>
<td>RW38</td>
<td>Insulating Flange</td>
</tr>
<tr>
<td>RW39</td>
<td>Service Abandonment Details</td>
</tr>
<tr>
<td>RW40</td>
<td>Standard Recycled Water System Notes</td>
</tr>
</tbody>
</table>
CHIP 2 INCH HIGH 'RW' IN CURB FACE
TO IDENTIFY WATER SERVICE LOCATION
USE WHEEL GRINDER, 1/4" DEEP GROOVE

WHERE SIDEWALK IS NOT ADJACENT TO CURB INSTALL ANGLE METER VALVE 12" BEHIND CURB IN PARKWAY WITHIN PUBLIC R/W. IN NO INSTANCE SHALL ANGLE METER VALVE BE INSTALLED ON PRIVATE PROPERTY.

42" MIN. - 12" DIAMETER OR SMALLER
48" MIN. - 14" DIAMETER OR GREATER

TRACER WIRE AND PURPLE IDENTIFICATION TAPE PER STD. DWG. RW15 AND RW16

NOTE: LOCATE INSULATING BUSHING AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.

CONSTRUCTION ITEMS / MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MFR. CAT. NO. OR SPEC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SERVICE SADDLE WITH IP THR'D. FOR: PVC PIPE</td>
<td>MUELLER</td>
<td>BR 2 5</td>
</tr>
<tr>
<td></td>
<td>DUCTILE-IRON PIPE (D.I.P.)</td>
<td>JAMES JOHNSON</td>
<td>F-1644W</td>
</tr>
<tr>
<td></td>
<td>FORD METER BOX</td>
<td>AT MCDONALD</td>
<td>7795A</td>
</tr>
<tr>
<td></td>
<td>MUELLER</td>
<td>AT MCDONALD</td>
<td>7795A</td>
</tr>
<tr>
<td>2</td>
<td>1&quot; BRASS BALL STYLE CORPORATION STOP</td>
<td>MUELLER</td>
<td>B-26255</td>
</tr>
<tr>
<td></td>
<td>FORD METER BOX</td>
<td>AT MCDONALD</td>
<td>747045</td>
</tr>
<tr>
<td></td>
<td>JAMES JOHNSON</td>
<td>F-1644W</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1&quot; BRASS ANGLE BALL METER VALVE WITH LOCKING</td>
<td>MUELLER</td>
<td>B-24255</td>
</tr>
<tr>
<td></td>
<td>FORD METER BOX</td>
<td>AT MCDONALD</td>
<td>746425</td>
</tr>
<tr>
<td></td>
<td>JAMES JOHNSON</td>
<td>F-1644W</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1&quot; COPPER TUBING</td>
<td>---</td>
<td>TYPE &quot;K&quot; SOFT</td>
</tr>
</tbody>
</table>

NOTES:
1. DOUBLE STRAP SERVICE SADDLE FOR ALL SIDWAYS.
2. INSTALL CORPORATION STOP WITH KEY SIDWAYS, IN OPEN POSITION.
3. THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE GUIDE OR PILOT TAP. TAPS INTO PVC PIPE SHALL BE MADE WITH APPROVED TAPPING BIT FOR 900 PVC PIPE.
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
5. NO TAP TO MAIN SHALL BE WITHIN 24" OF VALVE, COUPLING, FITTING, OR ANOTHER TAP.
6. NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
7. SERVICE TERMINATION POINT SHALL NOT BE PLACED IN DRIVEWAYS.
8. WARNING TAG SHALL BE PLACED ON THE ANGLE METER VALVE PER STANDARD DRAWING RW 16.
9. TRENCH BACKFILL SHALL BE ONE SACK SLURRY (100-E-100) AS REQUIRED BY LOCAL JURISDICTIONAL AGENCY/CITY, UNLESS OTHERWISE SHOWN.
10. METER BOX AND ASSEMBLY TO BE FURNISHED AND INSTALLED BY OTHERS PER PURVEYOR.
11. ALL SWEAT FITTINGS SHALL BE ASSEMBLED WITH SILVER SOLDER.
12. FINAL LOCATION OF METER ASSEMBLY SHALL BE CONFIRMED WITH THE DISTRICT AND THE PURVEYOR PRIOR TO CONSTRUCTION.

WEST BASIN MUNICIPAL WATER DISTRICT

1-INCH RECYCLED WATER SERVICE

STANDARD DRAWING RW1

MARCH 2010

APPROVED

DISTRICT ENGINEER

RCE

DATE
CHIP 2 INCH HIGH 'RW' IN CURB FACE
NO IDENTIFY WATER SERVICE LOCATION
USE WHEEL GRINDER, 1/4" DEEP GROOVE

WHERE SIDEWALK IS NOT ADJACENT TO CURB INSTALL ANGLE METER VALVE 12" BEHIND CURB IN PARKWAY WITHIN PUBLIC R/W. IN NO INSTANCE SHALL ANGLE METER VALVE BE INSTALLED ON PRIVATE PROPERTY.

TRASURE WIRE AND PURPLE IDENTIFICATION TAPE PER STD. Dwg. RW15 AND RW 16

47" MIN. - 1/2" DIAMETER OR SMALLER
45" MIN. - 1/4" DIAMETER OR GREATER

SLOPE TO DISTRICT MAIN
NOTE: LOCATE INSULATING BUSHING AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.

METER ASSEMBLY BY PURVEYOR NOT BY NOTE TO

THRUST BLOCK 0.7 CU.FT.

CONSTRUCTION ITEMS / MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MFR. CAT. NO. OR SPEC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SERVICE SADDLE WITH CC THRD. FOR PVC PIPE</td>
<td>MUELLER</td>
<td>R-2-S</td>
</tr>
<tr>
<td>2</td>
<td>1-1/2&quot; BRASS BALL STYLE CORPORATION STOP</td>
<td>LAMPS JONES</td>
<td>AT MCDONALD</td>
</tr>
<tr>
<td>3</td>
<td>1-1/2&quot; BRASS ANGLE BALL METER VALVE WITH LOCKING</td>
<td>MUELLER</td>
<td>B-24277</td>
</tr>
<tr>
<td>4</td>
<td>1-1/2&quot; COPPER TUBING</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>VALVE BOX AND COVER PER STANDARD DRAWING RW7</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

NOTE:
1. DOUBLE STRAP SERVICE SADDLE FOR ALL MAINS WITH TYPE 316 SS STRAPS AND TYPE 316 SS BOLTS OR SCREWS
2. INSTALL CORPORATION STOP WITH KEY SIDEWAYS, IN OPEN POSITION
3. THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE GUIDE OR PILOT TAP. TAPS INTO PVC PIPE SHALL BE MADE WITH AN APPROVED TAPPING BIT FOR 300 PVC PIPE
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
5. NO TAP TO MAIN SHALL BE WITHIN 24" OF VALVE, COUPLING, JOINT, FITTING OR ANOTHER TAP.
6. NO SPACES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDERING COUPLING SHALL BE USED.
7. SERVICE DERMINATION POINT SHALL NOT BE PLACED IN DRIVEWAYS.
8. WARNING TAG SHALL BE PLACED ON THE ANGLE METER VALVE PER STANDARD DRAWING RW16.
9. TRENCH BACKFILL SHALL BE ONE SACK SLURRY (100-E-100) AS REQUIRED BY LOCAL JURISDICTIONAL AGENCY/CITY, UNLESS OTHERWISE SHOWN.
10. METER BOX AND ASSEMBLY TO BE FURNISHED AND INSTALLED BY OTHERS PER PURVEYOR.
11. ALL SWEAT FITTINGS SHALL BE ASSEMBLED WITH SILVER SOLDER.
12. FINAL LOCATION OF METER ASSEMBLY SHALL BE CONFIRMED WITH THE DISTRICT AND THE PURVEYOR PRIOR TO CONSTRUCTION.

WEST BASIN MUNICIPAL WATER DISTRICT

1-1/2-INCH RECYCLED WATER SERVICE
NOT RECOMMENDED FOR USE

REVISION | DRAWN | APP'D | DATE |
---------|-------|------|------|
MARCH 2010 | | | |

2021

APPROVED

DISTRICT ENGINEER | RCE | DATE |
---------|------|------|

STANDARD DRAWING

RW2
CHIP 2 INCH HIGH "RW" IN CURB FACE
TO IDENTIFY WATER SERVICE LOCATION
USE WHEEL GRINDER, 17/4" DEEP GROOVE

SIDEWALK

WHERE SIDEWALK IS NOT ADJACENT TO CURB INSTALL ANGLE METER VALVE 12" BEHIND CURB IN PARKWAY WITHIN PUBLIC R/W. IN NO INSTANCE SHALL ANGLE METER VALVE BE INSTALLED ON PRIVATE PROPERTY.

42" MIN. - 12" DIAMETER OR SMALLER
48" MIN. - 14" DIAMETER OR GREATER

30" MIN.

QUARTER BEND SILVER SLIDER (LONG RADIUS)
VALUE BOX AND COVER (PER RW) INSTALLED TEMPORARILY UNTIL METER BOX INSTALLED
METER ASSEMBLY BY PURVEYOR
SEE NOTE 10

SLOPE TO DISTRICT MAIN
THRUHT BLOCK 0.7 CU.FT.

NOTE: LOCATE INSULATING BUSHING AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.

CONSTRUCTION ITEMS / MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MFR. CAT. NO. OR SPEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SERVICE SADDLE WITH IP THR'D. FOR: PVC PIPE</td>
<td>MUELLER</td>
<td>RR 2-5</td>
</tr>
<tr>
<td></td>
<td>DUCTILE IRON PIPE (O.I.P.)</td>
<td>FORD METER BOX</td>
<td>702860</td>
</tr>
<tr>
<td></td>
<td>FORD METER BOX</td>
<td>AT MCDONALD</td>
<td>747046</td>
</tr>
<tr>
<td>2</td>
<td>2&quot; BRASS BALL STYLE CORPORATION STOP</td>
<td>MUELLER</td>
<td>20022N</td>
</tr>
<tr>
<td></td>
<td>AT MCDONALD</td>
<td>F-1029</td>
<td>747046</td>
</tr>
<tr>
<td>3</td>
<td>2&quot; BRASS ANGLE BALL METER VALVE WITH LOCKING</td>
<td>MUELLER</td>
<td>B-24286N-3</td>
</tr>
<tr>
<td></td>
<td>2010 METER BOX</td>
<td>0-1376W-17</td>
<td>74604602</td>
</tr>
<tr>
<td>4</td>
<td>2&quot; COPPER TUBING</td>
<td>——</td>
<td>TYPE &quot;K&quot; SOFT</td>
</tr>
</tbody>
</table>

NOTE:
1. DOUBLE STRAP SERVICE SADDLE FOR ALL MAINS.
2. INSTALL CORPORATION STOP WITH KEY SIDEWAYS, IN OPEN POSITION.
3. THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE GUIDE OR PILOT TAP. TAPS INTO PVC PIPE SHALL BE MADE WITH AN APPROVED TAPPING BIT FOR C900 PVC PIPE.
4. THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
5. NO TAP TO MAIN SHALL BE WITHIN 24" OF VALVE, COUPLING, JOINT, FITTING, OR ANOTHER TAP.
6. NO SPACES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
7. SERVICE TERMINATION POINT SHALL NOT BE PLACED IN DrIVeways.
8. WARNING TAG SHALL BE PLACED ON THE ANGLE METER VALVE PER STANDARD DRAWING RW16.
9. TRENCH BACKFILL SHALL BE ONE SACK SLURRY (100-E-100) AS REQUIRED BY LOCAL JURISDICTIONAL AGENCY/CITY, UNLESS OTHERWISE SHOWN.
10. METER BOX AND ASSEMBLY TO BE FURNISHED AND INSTALLED BY OTHERS PER PURVEYOR.
11. ALL SWEAT FITTINGS SHALL BE ASSEMBLED WITH SILVER SOLDER.
12. FINAL LOCATION OF METER ASSEMBLY SHALL BE CONFIRMED WITH THE DISTRICT AND THE PURVEYOR PRIOR TO CONSTRUCTION.

WEST BASIN MUNICIPAL WATER DISTRICT

2-INCH RECYCLED WATER SERVICE

REW3
NOTE:

1. WHERE SIDEWALK IS NOT ADJACENT TO CURB SET TOP OF VALUE BOX ADJACENT TO AND AT CURB ELEVATION, PRECISE LOCATION TO BE ESTABLISHED AND APPROVED BY THE DISTRICT AND BY THE PURVEYOR. VAULT COVER TO BE SET TO CONFORM TO PARKWAY GRADE (INSTALLED BY OTHERS PER PURVEYOR).

2. MINIMUM SERVICE CONNECTION FOR A 3" METER SHALL BE 4" IN SIZE

3. EASEMENTS MUST BE PROVIDED IF INSTALLATION IS ON PRIVATE PROPERTY.

4. FOR METERS IN SLOPES, SEE STANDARD DRAWING RW4.

5. PROVIDE NECESSARY FITTINGS AND THROST BLOCKS TO CONSTRUCT SERVICE LINE TO CORRECT ELEVATION AT METER VAULT AND TO CLEAR VERTICALLY ANY EXISTING UTILITY

6. TWO (2) WARNING TAGS SHALL BE PLACED IN THE RECYCLED WATER METER FACILITY.

7. MARK CURB FACE WITH "RW" IN 2-INCH HIGH LETTERS AS PER STANDARD DRAWING RW4.

8. EXTEND TRACER WIRE TO VALUE BOX AND EXTEND 10 FT. METER BOX VATELY (A MINIMUM OF ADDITIONAL 10 FEET)

9. LOCATE INSULATING KITS AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.

10. METER, VALVES, FITTINGS, SPOOLS, THRUST BLOCKS AND METER VAULT TO BE FURNISHED AND INSTALLED BY OTHERS PER PURVEYOR. 3-INCH METER ASSEMBLY SHALL REQUIRE 4-INCH BY 3-INCH REDUCER.

11. ALL FLANGED NUTS AND BOLTS SHALL BE TYPE 316 STAINLESS STEEL

12. METER VALVE ASSEMBLY SHALL HAVE A MINIMUM OF 36" CLEARANCE FROM ANY WALL, TREES, ABOVE GROUND STRUCTURE OR UTILITY FACILITY.

CONSTRUCTION ITEMS / MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4-INCH D400 PVC PIPE, DRY (LENGTH AS REQUIRED)</td>
</tr>
<tr>
<td>2</td>
<td>6-INCH Ductile Iron Fittings as necessary to raise service elevation to specified depth and clear existing utilities</td>
</tr>
<tr>
<td>3</td>
<td>6-INCH Ductile Iron Plug with 3/4&quot;-10 THREADED TAP</td>
</tr>
<tr>
<td>4</td>
<td>Thrust Block per Standard Drawing RW4</td>
</tr>
<tr>
<td>5</td>
<td>Valve, Box and Cover per Standard Drawing RW4. Temporarily installed until Meter Vault Assembly Installed</td>
</tr>
<tr>
<td>6</td>
<td>2-INCH Brass Ball Valve and 2-INCH Brass Threaded Plug</td>
</tr>
<tr>
<td>7</td>
<td>2-INCH Brass 90° Elbow and 2-INCH Brass Fitting</td>
</tr>
</tbody>
</table>

WEST BASIN MUNICIPAL WATER DISTRICT

3-INCH AND 4-INCH RECYCLED WATER SERVICE

<table>
<thead>
<tr>
<th>REVISION</th>
<th>DRAWN</th>
<th>APPROVED</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DISTRICT ENGINEER</th>
<th>RCE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STD. NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW4</td>
</tr>
</tbody>
</table>
NOTES:
1. FOR SIZES 6" TO 12" TAPPING SLEEVES SHALL BE MECHANICAL JOINT TYPE OR STAINLESS STEEL FULL-CIRCLE. FOR SIZES LARGER THAN 12", STAINLESS STEEL FULL-CIRCLE TAPPING SLEEVE ONLY.

2. ALL CONTRACTOR PROVIDED BURIED BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL AND COATED WITH COLD APPLIED BITUMASTIC WATER-PROOFING COMPOUND.

3. CONTRACTOR TO PROVIDE DOUBLE NUTS ON ALL SLEEVE BOLTS (316 SS), WITH NON-GREASE LUBRICATION.

4. TAP ON EXISTING MAIN SHALL BE ONE SIZE LESS, AND MIN. OF 5 FT. FROM COLLAR OR SERVICE.

5. ANCHOR BLOCK REQUIRED AT ALL TIMES. ANCHOR BLOCK SHALL BE TRENCH WIDTH PLUS TWO PIPE DIAMETERS.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TAPPING SLEEVE AND VALVE</td>
<td>MUELLER, CLOW OR APPROVED EQUAL</td>
</tr>
<tr>
<td>3</td>
<td>VALVE BOX &amp; COVER PER STANDARD DRAWING RW7.</td>
<td>-----</td>
</tr>
<tr>
<td>4</td>
<td>CONCRETE RING PER STANDARD DRAWING RW7.</td>
<td>-----</td>
</tr>
<tr>
<td>5</td>
<td>ANCHOR BLOCK PER STANDARD DRAWING RW19 (SEE NOTE 5)</td>
<td>-----</td>
</tr>
<tr>
<td>6</td>
<td>THRUST BLOCK PER STANDARD DRAWING RW19.</td>
<td>-----</td>
</tr>
<tr>
<td>7</td>
<td>VALVE STEM EXTENSION PER STANDARD DRAWING RW8 IF DEPTH OF VALVE NUT EXCEEDS 4 FEET.</td>
<td>-----</td>
</tr>
</tbody>
</table>

WEST BASIN MUNICIPAL WATER DISTRICT

TAPPING OF PVC OR DIP MAINS

REVISED: JUNE 2003
DRAWN: 2021
APPROVED: RCE
NOZZLE TO BE STEEL, CEMENT-MORTAR LINED, TYPE 2. CEMENT COATED, TYPE 5.

Wrapping Plate (Thickness "t")

Steel Nozzle (Thickness 3/8" Min.)

CEMENT-MORTAR COATING

EXIST. STEEL CYL.

EXIST. CML

MORTAR LINE INSIDE FOR COLD-TAPS ONLY

Nozzle Dimensions

<table>
<thead>
<tr>
<th>Tap Size</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>5&quot;</td>
<td>A</td>
</tr>
<tr>
<td>8&quot;</td>
<td>B</td>
</tr>
<tr>
<td>10&quot;</td>
<td>C</td>
</tr>
<tr>
<td>12&quot;</td>
<td>D</td>
</tr>
</tbody>
</table>

Order of Construction

1. REMOVE CEMENT MORTAR COATING ON EXISTING STEEL MAIN
2. WELD WRAPPER PLATE AND NOZZLE TO EXISTING STEEL CYLINDER
3. FILL VOID INSIDE NOZZLE WITH CEMENT-MORTAR
4. HOT TAP PIPE – REMOVE COUPON
5. 2-HOLE FLANGE TO LEVEL VALVE
6. CEMENT-MORTAR COATING OF PIPE EXTERIOR

General Notes:

1. HOT-TAP EXISTING MAINS UNLESS WEST BASIN REQUIRES A COLD-TAP.
2. ALL CEMENT MORTAR LINING AND COATING SHALL BE PER AWWA C205.
3. "t" – THICKNESS OF EXISTING STEEL CYLINDER (PIPE)
4. TAP ON EXISTING MAIN SHALL NOT BE LARGER THAN THE SIZE OF THE MAIN.
1. BUTTERFLY VALVE OPERATORS SHALL BE LOCATED ON THE LEFT HAND SIDE OF THE VALVE WHEN STANDING ON THE FLANGED END OF THE VALVE (AT THE TEE OR CROSS) AND LOOKING THROUGH THE VALVE TOWARD THE PIPE END. AT STREET INTERSECTIONS WHERE VALVE BOX LOCATION MAY INTERFERE WITH PROPOSED CONCRETE CROSS GUTTER, PIPELINE SHALL BE MOVED AWAY FROM STANDARD LOCATION AS REQUIRED PER DETAIL HEREIN.

2. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE NUT EXCEEDS 4 FEET.

3. ANCHOR BLOCK REQUIRED AT ALL TIMES. ANCHOR BLOCK SHALL BE TRENCH WIDTH PLUS TWO PIPE DIAMETERS WIDE AND SHALL EXTEND VALVE SIZE PLUS SIX INCHES BELOW BOTTOM OF Trench.

4. ALL CONTRACTOR PROVIDED BURIED BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL AND COATED WITH 80 MILS OF COLD-APPLIED BITUMASTIC WATER-PROOFING COMPOUND.

### CONSTRUCTION ITEMS / MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MFR. CAT. NO.</th>
<th>OR SPEC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BUTTERFLY VALVE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8&quot; PVC SDR35 PIPE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10 1/4&quot; BODY AND COVER (BOX LID)</td>
<td>BROOKS</td>
<td>4-TT</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CONCRETE RING, CLASS 560-C-3250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>VALVE STEM EXTENSION PER STANDARD DRAWING RWB (SEE NOTE 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>ANCHOR BLOCK PER STANDARD DRAWING RW15 (SEE NOTE 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### BUTTERFLY VALVE OPERATOR POSITIONS

WEST BASIN MUNICIPAL WATER DISTRICT

BUTTERFLY VALVE

VALVE BOX AND COVER
NOTES:
1. ALL CONTRACTOR PROVIDED BURIED BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL AND COATED WITH 80 MILS OF COLD-APPLIED BITUMATIC WATER-PROOFING COMPOUND.
2. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE NUT EXCEEDS 4 FEET.
3. ANCHOR BLOCK REQUIRED AT ALL TIMES. ANCHOR BLOCK SHALL BE TRENCH WIDTH PLUS TWO PIPE DIAMETERS WIDE AND SHALL EXTEND VALVE SIZE PLUS SIX INCHES BELOW BOTTOM OF TRENCH.

### CONSTRUCTION ITEMS/MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>WEB CAT. NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RESILIENT WEDGE GATE VALVE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8&quot; PVC SDR35 PIPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3, 4</td>
<td>10 1/4&quot; BODY AND COVER (BOX LID)</td>
<td>BROOKS</td>
<td>4-TT</td>
</tr>
<tr>
<td>5</td>
<td>CONCRETE RING, CLASS 560-C-3250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>VALVE STEM EXTENSION PER STANDARD DRAWING RW8 (SEE NOTE 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>ANCHOR BLOCK PER STANDARD DRAWING RW19 (SEE NOTE 3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WEST BASIN MUNICIPAL WATER DISTRICT

GATE VALVE

VALVE BOX AND COVER

STANDARD DRAWING RW7A
NOTES:

1. PROVIDE VALVE STEM EXTENSION WHEN DEPTH TO OPERATING NUT EXCEEDS 48" (FABRICATE EXTENSION TO FIELD MEASUREMENT – SEE NOTE 2).

2. NO VALVE STEM EXTENSION SHALL BE LESS THAN 2 FEET IN LENGTH. TERMINAL EXTENSION 24" TO 36" FROM FINISHED GRADE.

3. PROVIDE ADDITIONAL SPACER PLATE WHEN DISTANCE TO BOTTOM SOCKET EXCEEDS 5 FEET.

4. HOT DIP GALVANIZE EXTENSION AFTER FABRICATION.
NOTES:

1. ALL BURIED BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL AND COATED WITH 80 MILS OF COLD-APPLIED BITUMASTIC WATER PROOFING COMPOUND.

2. PROVIDE VALVE STEM EXTENSION TO WITHIN 24 INCHES OF FINISHED SURFACE PER STANDARD DRAWING RW8.

3. IN AREAS WHERE NO CURB OR BERM EXISTS, OR WHERE THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL ONE (1) GUARD POST PER STANDARD DRAWING RW26 AT EACH CORNER OF CONCRETE PAD.

4. FOR A/V ASSEMBLIES IN SLOPES, SEE STANDARD DRAWING RW14.

5. PAINT VALVE AND PIPING WITH ONE COAT PRIMER AND TWO COATS OF FINISH PAINT PER THE STANDARD SPECIFICATIONS. PURPLE COLOR SHALL BE APPROVED BY THE DISTRICT.

6. COORDINATE LOCATION OF VENTED COVER AND COLOR OF COVER WITH DISTRICT AND JURISDICTIONAL AGENCY REPRESENTATIVE. COLOR OF COVER: SANDSTONE UNLESS JURISDICTION AGENCY REQUESTS SPECIFIC COLOR. INSTALL WEST BASIN LOGO DECAL ON EXTERIOR OF VENTED COVER.

7. FOR PVC TRANSMISSION MAIN, CONNECT TRACER WIRES FROM MAIN AND A/V VALVE WITH A SILICONE FILLED DIRECT BURIAL WIRE NUT AT CORP STOP. FOR METALLIC TRANSMISSION MAIN, CONNECT A/V VALVE TRACER WIRE DIRECTLY TO PIPE WITH WELD. EXTEND TRACER WIRE TO VALVE BOX AND COVER.
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MFR. CAT. NO. OR SPEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1&quot; (2&quot;) COMBINATION AIR VALVES</td>
<td>A.R.I.</td>
<td>2-046 SE-1236 (1450)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>APCO CRISPIN VALMAC</td>
<td>UL10 (UL20) 201C (202C)</td>
</tr>
<tr>
<td>2</td>
<td>LINEAR LOW DENSITY POLYETHYLENE VENTED PIPE COVER: 18&quot; DIA. X 30&quot; HIGH</td>
<td>AMORCAST PRODUCTS OR PIPELINE PRODUCTS</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1&quot;/2&quot; BRASS THREADED CLOSE NIPPLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1&quot;/2&quot; BRASS TEE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1&quot;/2&quot; BRASS BALL VALVE (FIPTXFIPT) WITH LEVER HANDLE</td>
<td>JAMES JONES FORD METER BOX AY MCDONALD</td>
<td>B-2028JN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E-1900W</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B11-444-6L (B11-777-6L)</td>
</tr>
<tr>
<td>6</td>
<td>1&quot;/2&quot; X 3/8&quot; STAINLESS STEEL BUSHING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3/8&quot; DIA. X 2&quot; LONG SS NIPPLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3/8&quot; SS VALVE WITH HANDLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1&quot;/2&quot; BRASS ADAPTER (FIPT X SWEAT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1&quot;/2&quot; COPPER TUBING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>QUATER BEND SILVER SOLDER (LONG RADIUS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1&quot;/2&quot; BRASS BALL VALVE (FIPTXFIPT) WITH 2&quot; SQUARE OPERATING NUT ADAPTER ATTACHED WITH STAINLESS STEEL NUTS AND BOLTS</td>
<td>JAMES JONES FORD METER BOX AY MCDONALD</td>
<td>B-2028JN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E-1900W</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B11-444-6L (B11-777-6L)</td>
</tr>
<tr>
<td>13</td>
<td>1&quot;/2&quot; BRASS BALL STYLE CORPORATION STOP</td>
<td>SEE RW1 AND RW3</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>SERVICE SADDLE WITH IP THR'D</td>
<td>SEE RW1 AND RW3</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1&quot;/2&quot; SCH 80 PVC SHORT NIPPLES AND 90° BENDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>1&quot;/2&quot; PRE-FABRICATED PVC OUTLET WITH RIGID STAINLESS STEEL SCREEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>30-INCH SQUARE CONCRETE PAD, CLASS 560-C-3250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>VALVE BOX AND COVER</td>
<td>SEE RW17</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>VALVE STEM EXTENSION (SEE NOTE 2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WEST BASIN MUNICIPAL WATER DISTRICT

1" AND 2" COMBINATION AIR VALVES

REVISION | DRAWN | APP'D. | DATE |
----------|-------|--------|------|
JUNE 2010  |       |        |      |
2021       |       |        |      |

APPROVED

DISTRICT ENGINEER | RCE | DATE |
-------------------|-----|------|

STANDARD DRAWING

RW9

SHEET 3 OF 3
1. METER BOX AND COVER SHALL BE MANUFACTURED OF REINFORCED POLYMER PLASTIC MORTAR. SIZE: 12"W x 20"L x 12"D
MANUFACTURER'S: J&R INC, ARMORCAST PRODUCTS CO, OR APPROVED EQUAL
2. ALL ABOVE GROUND PIPING AND PIPING WITHIN METER BOX SHALL BE PAINTED PURPLE PER WBMWD STANDARD SPECIFICATIONS

WEST BASIN MUNICIPAL WATER DISTRICT

RECYCLED WATER SAMPLING STATION

RW10
NOTES:

1. TEST BULK HEAD IS TO BE REMOVED AFTER SUCCESSFUL PRESSURE TEST.

2. THRUST BLOCK REQUIRED UNLESS PIPE IS FULLY RESTRAINED. THRUST BLOCK PER STANDARD DWG RW19.
### NOTES:

1. WHEN BLOW OFF VALVE IS PLACED BEHIND CURB USE BROOKS 66T OR EISEL 6T METER BOX WITH STEEL LID OR APPROVED EQUAL. WHEN BLOW OFF VALVE IS PLACED IN THE STREET USE 24” PRECAST CONCRETE MANHOLE WITH ALHAMBRA A-1254B COVER OR APPROVED EQUAL.

2. EXACT LOCATION OF BLOWOFF TO BE AS PROVIDED ON CONSTRUCTION PLANS AND AS APPROVED BY THE DISTRICT.

### CONSTRUCTION ITEMS / MATERIALS LIST

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MFR. CAT. NO.</th>
<th>SIZE/DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>2” BRASS BALL VALVE</td>
<td>MUeller James Jones</td>
<td>B-20263N</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ford Meter Box AY MCDonald</td>
<td>E-1900W</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B11-777-NL</td>
<td>76101</td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>2” COPPER TUBING</td>
<td>---</td>
<td>---</td>
<td>TYPE &quot;K&quot; SOFT</td>
</tr>
<tr>
<td>(3)</td>
<td>2” COPPER 90° SWEAT ELBOW (LONG RADIUS) (SILVER SOLDER)</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>2” BRASS COUPLING – Copper Sweat to IP Thread</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td>2” BRASS NIPPLE, IP THREAD x IP THREAD</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(6)</td>
<td>RIGID STAINLESS STEEL REDUCING BUSHING (2-1/2” x 2”)</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(7)</td>
<td>DUCTILE IRON PLUG, PIPE SIZE x 2-1/2” IP THREAD TAP</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(8)</td>
<td>WARNING TAG PER STANDARD DRAWING RW16</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(9)</td>
<td>THRUST BLOCK, PER STANDARD DRAWING RW19</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(10)</td>
<td>PRECAST CONCRETE VAULT WITH COVER (SEE NOTE )</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(11)</td>
<td>2” BRASS THREADED PLUG</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

---

WEST BASIN MUNICIPAL WATER DISTRICT

DEAD END WITH PERMANENT

2-INCH BLOW OFF

STANDARD DRAWING

RW12
TABLE 1 - WALL DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>UP TO 2'-8&quot; (MAXIMUM)</th>
<th>UP TO 5'-4&quot; (SEE NOTE 14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>#5@16&quot;</td>
<td>CONSTRUCT REINFORCED CONCRETE RETAINING WALL PER SPPWC &quot;GREENBOOK&quot; STANDARD DRAWING NO.813-3 (TYPE 4).</td>
</tr>
<tr>
<td>C</td>
<td>2-FOOT MIN. CLEARANCE TYPICAL (SEE NOTE 6)</td>
<td>2-FOOT MIN. CLEARANCE TYPICAL (SEE NOTE 6)</td>
</tr>
</tbody>
</table>

MIN. CLEARANCE BETWEEN REBAR AND APPURTENANCE SHALL BE 2-INCHES

WELDED WIRE MESH (6X6 - W4.0XW4.0)

DRAINAGE SWALE DETAIL
TO BE CONSTRUCTED WITH AIR/VAC. BLOW OFF, METER, TEST STATION, RP BACKFLOW ASSEMBLY, WHEN A SLOPE EXISTS AT THE LOCATION OF THESE APPURTENANCES.

1. THE DESIGN AND SIZE OF THE DRAINAGE SWALE SHALL BE DETERMINED BASED ON THE SITE SPECIFIC DRAINAGE AREA AND THE CORRESPONDING HYDROLOGY.

WALL SECTION

WEST BASIN MUNICIPAL WATER DISTRICT
RETAINING WALL DETAIL

REVISION  DRAWN  APP'D.  DATE
JUNE 2003  2021

APPROVED

DISTRICT ENGINEER  RCE  DATE

STANDARD DRAWING
RW14  SHEET 1 OF 2
1. MASONRY BLOCK SHALL BE 8"x 8"x 16" UNITS CONFORMING TO ASTM C-90 CLASS S AND CONCRETE MASONRY ASSOC. STANDARDS.
2. MORTAR AND GROUT SHALL MATCH BLOCKWORK AND BE IN CONFORMANCE WITH SECTION 202-2 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK).
3. FILL ALL CELLS WITH GROUT.
4. OMIT MORTAR FROM FIRST COURSE ABOVE FINISHED GRADE AT 32" CENTERS.
5. ALL CONCRETE SHALL BE CLASS 560-C-3250.
6. MINIMUM 2-FOOT CLEARANCE SHALL BE MEASURED FROM SLAB PENETRATION(S) TO WALL FACE. CLEARANCE FROM WALL FACE TO PROTECTIVE ENCLOSURE SHALL BE A MINIMUM OF 12-INCHES AND ALLOW FOR REMOVAL OF ENCLOSURE FOR APPURTENANCE MAINTENANCE.
7. NO SPURS ALLOWED IN REINFORCING BARS.
8. CONTRACTOR SHALL CONSTRUCT RETAINING WALL A MINIMUM OF 8-FOOT CLEARANCE FROM STREET CURB FACE.
9. CONTRACTOR SHALL VERIFY EXISTING SLOPES IN THE FIELD. WHERE SLOPE EXCEEDS 2:1 MAXIMUM, BUT LESS THAN 1.5:1 SLOPE, CONTRACTOR SHALL CONSTRUCT REINFORCED CONCRETE RETAINING WALL PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK) — STANDARD PLAN NO. 613-3, TYPE 4. WALL SHALL BE CONSTRUCTED CONSISTENT WITH GENERAL DETAIL DIMENSIONS AND CLEARANCES SHOWN IN DETAIL ABOVE.
10. USE WITH GREENBOOK STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION DETAIL 618-2, CASE 2.
11. INSTALL DRAIN THROUGH WALL PER GREENBOOK STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION DETAIL 617. SLOPE SWALE (1% MIN.) TO DIRECT WATER TO DRAIN THROUGH WALL.
12. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.
13. AN EXCAVATION/ENCROACHMENT PERMIT IS REQUIRED FOR CONSTRUCTION AND/OR DISCHARGE OF DRAINAGE WITHIN PUBLIC ROAD RIGHT OF WAY.
14. DESIGN HEIGHT OF Reinforced concrete RETAINING WALL PER SPPWC "GREENBOOK" DETAIL 613-3, TYPE 4 INCLUDES 18-INCHES DEEP FORESLPUE OVER WALL FOUNDATION. RETAINED SOIL HEIGHT "A" PER ABOVE TABLE 1 EQUATES TO 3'-10"
RETAINED HEIGHT PER DETAIL (CALCULATION: 5'-4" ("A") - 18" FORESLPUE = 3'-10" RETAINED SOIL).
NOTES:

ALL RECYCLED WATER PIPELINES, INCLUDING SERVICE LINES AND ATTACHED APPURTENANCES SHALL BE PROVIDED WITH IDENTIFICATION PER ONE OF THE FOLLOWING ALTERNATIVES:

PVC PIPE ALTERNATIVE:
1. PIPE SHALL BE COLORED PURPLE AND INTEGIRALLY STAMPED/MARKED WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" PRINTED IN A MINIMUM OF 1/2 INCH HIGH BLACK LETTERING ON OPPOSITE SIDES OF THE PIPE AND SHALL BE REPEATED EVERY 12 INCHES.

2. AS AN OPTION TO PURPLE PIPE, PURPLE COLORED POLYETHYLENE IDENTIFICATION TAPE WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" MAY BE ATTACHED TO THE TOP OR PIPE PER STANDARD DRAWING RW16.

3. AS AN OPTION TO EITHER OF THE ABOVE ALTERNATIVES, PURPLE COLORED POLYETHYLENE WRAP WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" MAY BE USED TO ENCASE THE PIPE PER STANDARD DRAWING RW16.

DUCTILE IRON PIPE ALTERNATIVE:
1. PURPLE COLORED POLYETHYLENE IDENTIFICATION TAPE WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" SHALL BE ATTACHED TO THE TOP OF PIPE PER STANDARD DRAWING RW16.

2. AS AN OPTION TO THE ABOVE ALTERNATIVE, PURPLE COLORED POLYETHYLENE WRAP WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" MAY BE USED TO ENCASE THE PIPE PER STANDARD DRAWING RW16. PURPLE POLYETHYLENE ENCASEMENT SHALL BE USED AS THE SECOND LAYER OF ENCASEMENT FOR DUCTILE IRON PIPE CONSTRUCTION PER THE STANDARD SPECIFICATIONS.

WEST BASIN MUNICIPAL WATER DISTRICT

RECYCLED WATER PIPE IDENTIFICATION

REVISED: JUNE 2023
DRAWN: 2021
APPROVED:

DISTRICT ENGINEER RCE

STANDARD DRAWING RW15
1. RECYCLED WATER WARNING TAGS SHALL CONSIST OF WEATHERPROOF PLASTIC, 3-INCH BY 4-INCH, WITH PURPLE BACKGROUND AND BLACK LETTERING. WARNING TAGS SHALL BE ATTACHED TO EACH RECYCLED WATER DEVICE WITH A NYLON TIE WRAP.

2. RECYCLED WATER IDENTIFICATION TAPE SHALL CONSIST OF A MINIMUM 4 MIL. POLYETHYLENE WITH METALLIC BACKING, WITH PURPLE BACKGROUND AND BLACK LETTERING. TAPE WIDTH SHALL BE 6-INCHES FOR PIPE 6-INCH AND SMALLER AND 12-INCHES FOR PIPE 8-INCH AND LARGER. LETTERING SHALL BE 2-INCHES HIGH AND THE MESSAGE SHALL REPEAT EVERY 36-INCHES. IDENTIFICATION TAPE SHALL BE FASTENED TO THE PIPE WITH PLASTIC ADHESIVE TAPE BANDED AROUND THE PIPE AT NO MORE THAN 5-FOOT INTERVALS, OR AS APPROVED THE DISTRICT.

3. PURPLE COLORED POLYETHYLENE ENCASEMENT WITH A MINIMUM THICKNESS OF 8 MILS MAY BE SUBSTITUTED FOR IDENTIFICATION TAPE SPECIFIED IN NOTE 2 ABOVE. MESSAGE SHALL CONTAIN 1-INCH HIGH LETTERING REPEATING EVERY 24-INCHES.

4. RECYCLED WATER WARNING TAPE MEETING THE SAME SPECIFICATIONS AS NOTE 2 ABOVE SHALL BE BURIED ABOVE THE PIPE ZONE BEDDING A MINIMUM OF 12-INCHES ABOVE THE PIPE.

5. WARNING TAGS, IDENTIFICATION/WARNING TAPE AND POLYETHYLENE ENCASEMENT SHALL BE AS MANUFACTURED BY T. CHRISTY ENTERPRISES, TERRA TAPE (DIVISION OF REEF INDUSTRIES) OR APPROVED EQUAL.

6. RECYCLED WATER PIPELINES LOCATED IN NON-PAVED AREAS OUTSIDE STREET RIGHT-OF-WAY SHALL ALSO BE IDENTIFIED WITH MARKER POSTS PER STD. DWG. RW28.

7. PURPLE COLOR SHALL BE PANTONE 512.
1. Should large gravel or cobbles be encountered at the trench bottom, they shall be removed and replaced with granular material which shall be compacted to provide uniform support and a firm foundation.

2. If excessively wet, soft, spongy, unstable, or similarly unsuitable material is encountered at the trench bottom, it shall be removed and replaced by crushed rock or gravel of sufficient thickness to form a firm foundation.

3. Where wet, unstable or running soil is encountered, solid sheeting is required for all vertical trench walls.

4. Trench sheeting or shoring shall be a minimum of 6 inches from the pipe barrel at springline.

5. Vertical trench walls
   a. For depths up to 5'-0", no trench support is required unless unstable or running soil is encountered.
   b. For depths exceeding 5'-0", sheeting, shoring or other equivalent bracing shall be provided in accordance with the California Department of Industrial Relations (CAL/OSHA) Code of Regulations Title 8, Subchapter 4 "Construction Safety Orders".

6. Optional combination of vertical and sloping trench walls
   a. Trench depths exceeding 5'-0" shall have vertical walls in pipe zone unless otherwise approved by the engineer.
   b. For trenches with combined walls and any depth exceeding 3'-6", the contractor shall protect in accordance with the California Department of Industrial Relations (CAL/OSHA) Code of Regulations Title 8, Subchapter 4 "Construction Safety Orders".

7. Bedding:
   a. All pipe shall have a bedding with an SE of 30 minimum.
   b. SE of 30 and haunch bedding shall be hand tamped to 90% relative compaction min. for PVC and all other flexible pipe installations, whereupon bedding above springline shall be compacted concurrently with the backfill.
   c. Provide hand excavated "bell hole" for each pipe joint so that the weight of pipe does not bear on the bell. Contractor shall re-fill and hand-tamp each "bell hole" prior to completing the placement of pipe bedding.
1. Trench backfill shall be as a minimum imported material with a S.E. of 30 or higher or Class II base compacted to 90% unless otherwise noted. If Jurisdictional Agency’s permit or standards are more stringent (one-sack survey for example), then the Jurisdictional Agency’s permit or standards shall govern.

2. Pave and base replacement thickness shall be 1-inch more than existing, unless otherwise noted. Minimum AC and base requirements are 4" AC over 8" AB. If Jurisdictional Agency’s permit or standards are more stringent, then the Jurisdictional Agency’s permit or standards shall govern.

3. Pipe zone bedding shall be per standard DWG RW17.

4. For trenches traversing a major street at 90° and/or in intersections of major streets, trench backfill from top of pipe zone to subbase with one sack sand slurry.

5. All traffic signal loops, traffic dots, traffic lines, pedestrian lines, and other painted markings are to be replaced by the contractor.

6. If noted on plans, existing paving may be required to be mechanically ground down a minimum of 2" by an additional 24" width. The permanent paving shall then be extended as an overlay into this area. All existing pavement edges are to be tack coated before application of permanent pavement. If there is less than 2" of pavement after grinding, than the ground area shall be removed by saw cutting and permanent pavement placed.

WEST BASIN MUNICIPAL WATER DISTRICT

TRENCH AND PAVING SECTION

DRAWN

APPROVED

DISTRICT ENGINEER
NOTES:

1. ALL CONCRETE FOR THRUST BLOCK TO BE CLASS 560-C-3250.
2. CONCRETE TO BE KEPT CLEAR OF ALL PIPE, NUTS, BOLTS, AND ENDS OF FITTINGS.
3. ALL BEARING AREAS TO BE AGAINST UNDISTURBED SOIL.
4. BEARING AREAS ARE BASED ON A TEST OF 200 PSI AND SOIL BEARING CAPACITY OF 1500 PSF AND SAFETY FACTOR OF 1.5. THE RATIO OF WIDTH TO HEIGHT CANNOT EXCEED 1:1/2.
5. DISTRICT'S FIELD REPRESENTATIVE MAY INCREASE THE SIZE OF THRUST BLOCK, IF IN HIS OPINION, THE SOIL BEARING VALUE IS LESS THAN THE ASSUMED VALUE.
6. TIE BARS NOT EMBEDDED IN CONCRETE SHALL BE CLEANED AND COATED WITH BOMILS OF COLD-APPLIED BITUMASTIC WATER PROOFING COMPOUND.
7. THRUST BLOCK ON CROSSES SHALL ONLY BE USED WHEN THERE IS A STUB-OUT ON ONE OR MORE SIDES.
8. PROVIDE POLYETHYLENE (8 MIL MIN) BETWEEN FITTING AND CONCRETE.

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>HORIZONTAL/VERTICAL ANCHOR AND THRUST BLOCK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90°</td>
</tr>
<tr>
<td>3 3/4&quot;</td>
<td>3.6</td>
</tr>
<tr>
<td>6&quot;</td>
<td>8.0</td>
</tr>
<tr>
<td>8&quot;</td>
<td>14.2</td>
</tr>
<tr>
<td>10&quot;</td>
<td>22.2</td>
</tr>
<tr>
<td>12&quot;</td>
<td>32.0</td>
</tr>
</tbody>
</table>

"A" DESIGNATES AREA IN SQ. FT. OF HORIZONTAL THRUST BLOCK.
"V" DESIGNATES VOLUME IN C.Y. OF VERTICAL ANCHOR BLOCK.
1. ALL STEEL CASING PIPE JOINTS SHALL BE WELDED FULL CIRCUMFERENCE.
2. PERIMETER OF CASING FOR CASINGS 10" OR LARGER IN DIAMETER TO BE PRESSURE CEMENTED. CONTRACTOR SHALL AVOID "FLOATING" PIPE DURING CEMENTING.
3. WATER MAIN PIPE TO BE PRESSURE TESTED PER STANDARD SPECIFICATIONS PRIOR TO FILLING CASING PIPE WITH CEMENT OR SAND.
4. CASING SHALL BE INSTALLED IN THE BORE, JACK AND/OR TUNNEL METHOD.
5. SPACE BETWEEN THE CASING INSULATORS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS EXCEPT THAT THERE SHALL BE AT LEAST 3 CASING INSULATORS PER PIPE SECTION ONE 12" FROM EACH END AND ONE CENTERED. ADDITIONALLY, ONE INSULATOR SHALL BE INSTALLED 12" FROM EACH END OF THE CASING.
6. BOTH ENDS OF THE CASING BETWEEN THE CASING AND CARRIER PIPE SHALL BE SEALED WATERPROOF USING AN APPROVED RUBBER CASING END SEAL. BANDS SHALL BE TYPE 304 STAINLESS STEEL.
7. PLACE RECYCLED WATER IDENTIFICATION TAPE ON PIPE PRIOR TO STRAPPING ON SKIDS.
8. ALL PIPE JOINTS WITHIN THE CASING SHALL BE RESTRAINED. CONTRACTOR SHALL FURNISH ALL NECESSARY THRUST RESTRAINT DEVICES.
9. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCY.
10. MINIMUM SIZE AND THICKNESS OF STEEL CASING PIPE SHALL BE AS SHOWN IN ABOVE TABLES. FOR LONG BORES OR SPECIAL SITUATIONS (RAILROAD CROSSINGS, ETC.) GREATER WALL THICKNESS THAN SHOWN MAY BE REQUIRED.
GENERAL NOTES:

1. ZONES IDENTICAL ON EITHER SIDE OF CENTER LINES.

2. ZONE "A" CONSTRUCTION IS ALLOWED ONLY FOR THE INDICATED CONVEYANCE; OTHERWISE SPECIAL PERMISSION. NO PIPES SHALL BE INSTALLED WITHIN THE PROHIBITED ZONE.

3. SPECIAL PERMISSION WILL BE REQUIRED TO CONSTRUCT WITHIN THE ZONE "B", WITH STATE DEPARTMENT OF PUBLIC HEALTH APPROVAL, NEWLY INSTALLED MAINS MAY BE EXEMPTED FROM THE SEPARATION DISTANCES IF THE WATER MAIN CAN BE ADEQUATELY PROTECTED AS SET FORTH IN CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, SECTION 64572, SUB-SECTION (H). PROPOSED PROTECTIVE MEASURE(S) SHALL BE SUBMITTED TO DISTRICT FOR CONSTRUCTION BEFORE REQUESTING APPROVAL FROM THE STATE HEALTH DEPARTMENT.

FIGURE 1 – PARALLEL CONSTRUCTION
CASE 1
NEW RECYCLED WATER

ZONE "D"
SPECIAL PERMISSION
NO JOINTS IN RECYCLED WATER

EXIST WATER
8' 8'

PROHIBITED ZONE
ZONE "C"
NO JOINTS IN RECYCLED WATER

CASE 2
NEW WATER MAIN

ZONE "C"
NO JOINTS IN WATER MAIN

EXIST UTILITY
8' 8'

PROHIBITED ZONE
ZONE "D"
SPECIAL PERMISSION
NO JOINTS IN WATER MAIN

GENERAL NOTES:
1. ZONE "C" CONSTRUCTION SHALL HAVE NO JOINTS. CROSSINGS SHALL BE MADE AT AN ANGLE NO LESS THAN 45° TO EXISTING PIPELINE. NO PIPES SHALL BE INSTALLED WITHIN THE PROHIBITED ZONE.

2. SPECIAL PERMISSION WILL BE REQUIRED TO CONSTRUCT WITHIN THE ZONE "D", WITH STATE DEPARTMENT OF PUBLIC HEALTH APPROVAL, NEWLY INSTALLED MAINS MAY BE EXEMPTED FROM THE SEPARATION DISTANCES IF THE WATER MAIN CAN BE ADEQUATELY PROTECTED AS SET FORTH IN CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, SECTION 64572, SUB-SECTION (H). PROPOSED PROTECTIVE MEASURE(S) SHALL BE SUBMITTED TO DISTRICT FOR CONSTRUCTION BEFORE REQUESTING APPROVAL FROM THE STATE HEALTH DEPARTMENT.

FIGURE 2 - CROSSINGS
NOTES:

1. ALL NEW WATER MAINS (DOMESTIC AND RECYCLED) SHALL BE INSTALLED PER THE LATEST CALIFORNIA CODE OF REGULATIONS RELATED TO DRINKING WATER.

2. CALIFORNIA CODE OF REGULATIONS, TITLE 22, SECTION 64572 (UPDATED APRIL 2019) STATES:
(A) NEW WATER MAINS AND NEW SUPPLY LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST 10 FEET HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING:

1) UNTREATED SEWAGE,
2) PRIMARY OR SECONDARY TREATED SEWAGE,
3) DISINFECTED SECONDARY–2.2 RECYCLED WATER (DEFINED IN SECTION 60301.220),
4) DISINFECTED SECONDARY–23 RECYCLED WATER (DEFINED IN SECTION 60301.225), AND
5) HAZARDOUS FLUIDS SUCH AS FUELS, INDUSTRIAL WASTES, AND WASTEWATER SLUDGE.

(B) NEW WATER MAINS AND NEW SUPPLY LINES SHALL BE INSTALLED AT LEAST 4 FEET HORIZONTALLY FROM, AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING:

1) DISINFECTED TERTIARY RECYCLED WATER (DEFINED IN SECTION 60301.230), AND
2) STORM DRAINAGE.

(C) NEW SUPPLY LINES CONVEYING RAW WATER TO BE TREATED FOR DRINKING PURPOSES SHALL BE INSTALLED AT LEAST 4 FEET HORIZONTALLY FROM, AND ONE FOOT VERTICALLY BELOW, ANY WATER MAIN.

(D) IF CROSSING A PIPELINE CONVEYING A FLUID LISTED IN SUBSECTION (A) OR (B), A NEW WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES TO AND AT LEAST ONE FOOT ABOVE THAT PIPELINE. NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN 8 HORIZONTAL FEET OF THE FLUID PIPELINE.

(E) THE VERTICAL SEPARATION SPECIFIED IN SUBSECTIONS (A), (B), AND (C) IS REQUIRED ONLY WHEN THE HORIZONTAL DISTANCE BETWEEN A WATER MAIN AND PIPELINE IS LESS THAN 10 FEET.

(F) NEW WATER MAINS SHALL NOT BE INSTALLED WITHIN 100 HORIZONTAL FEET OF THE NEAREST EDGE OF ANY SANITARY LANDFILL, WASTEWATER DISPOSAL POND, OR HAZARDOUS WASTE DISPOSAL SITE, OR WITHIN 25 HORIZONTAL FEET OF THE NEAREST EDGE OF ANY CESSEPOOL, SEPTIC TANK, SEWAGE LEACH FIELD, SEEPAGE PIT, UNDERGROUND HAZARDOUS MATERIAL STORAGE TANK, OR GROUNDWATER RECHARGE PROJECT SITE.

(G) THE MINIMUM SEPARATION Distances SET FORTH IN THIS SECTION SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH PIPE BARREL.

(H) WITH DEPARTMENT APPROVAL, NEWLY INSTALLED WATER MAINS MAY BE EXEMPT FROM THE SEPARATION Distances IN THIS SECTION, EXCEPT SUBSECTION (F), IF THE NEWLY INSTALLED MAIN IS:

1) LESS THAN 1320 LINEAR FEET,
2) REPLACING AN EXISTING MAIN, INSTALLED IN THE SAME LOCATION, AND HAS A DIAMETER NO GREATER THAN 6 INCHES MORE THAN THE DIAMETER OF THE MAIN 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.
1. All units must be in the latest edition of the list of approved backflow prevention devices as supplied by the Foundation for Cross Connection Control and Hydraulic Research by the U.S.C. School of Engineering.

2. Notify District prior to installation of unit.

3. Installation shall comply with the latest plumbing codes and applicable local agency requirements.

4. Upon completion of the installation of the device, a test shall be performed and a certificate of adequacy and operational compliance shall be furnished to District. The test shall be performed by a testing agency approved by the District.

5. Thrust blocks shall be sized per RW/19.

6. For Districts' recommended standards, see local purveyor for specific requirements.

7. All backflow devices shall be USC approved.

8. At no point shall backflow device be closer than 36" away from any structure, face of curb, back of sidewalk, above ground utility or pipe/strainer.
CONCRETE BLANKET

FOR EXISTING PIPES CROSSED OVER BY A NEW PIPE

NOTES:

1. **CONCRETE BLANKET IS REQUIRED WHEN THE CLEARANCE BETWEEN THE TOP OF THE EXISTING PIPE AND THE BOTTOM OF THE CROSSING PIPE IS LESS THAN 18".**

2. **"Y" = D/6 (6" MIN.) WHERE THE CLEARANCE BETWEEN THE TOP OF THE EXISTING PIPE AND THE BOTTOM OF CROSSING PIPE IS LESS THAN "Y". THE CONCRETE SHALL BE PLACED BETWEEN THE PIPES AND AROUND THE SIDES OF THE CROSSING PIPE UP TO A LEVEL EQUAL TO "Y" ABOVE THE EXISTING PIPE, OR AS REQUIRED BY NOTE 3 BELOW, WHICHEVER IS HIGHER.**

3. **"X" = 4-INCHES, MINIMUM, TO PROVIDE BEDDING MATERIAL FOR THE CROSSING PIPE. WHEN "X" IS LESS THAN MINIMUM, THE ENTIRE SURFACE OF THE BLANKET SHALL BE RAISED TO MAKE CONTACT WITH THE LOWER 90' OF THE CROSSING PIPE.**

4. **THE BLANKET SHALL EXTEND LONGITUDDINALLY TO THE FIRST JOINT BEYOND THE TRENCH EXCAVATION AT EACH END OF THE BLANKET, EXCEPT THAT THE BLANKET NEED NOT BE EXTENDED MORE THAN 4 FEET BEYOND THE TRENCH.**

5. **WHENEVER A PIPE BELL IS ENCOUNTERED WITHIN THE LIMITS OF THE BLANKET, ALL DIMENSIONS SHALL REFER TO THE BELL.**

6. **DUCTILE IRON PIPE SHALL BE WRAPPED WITH A DOUBLE LAYER OF 8-MIL POLYETHYLENE ENCAIMENT PRIOR TO PLACEMENT OF CONCRETE BLANKET.**

NOTES:

1. **COMPRESSIBLE BLANKET IS REQUIRED WHEN THE CLEARANCE BETWEEN THE TOP OF THE EXISTING PIPE AND THE BOTTOM OF THE CROSSING CONDUIT (BOX OR ARCH) IS LESS THAN 18".**

2. **THE BLANKET SHALL EXTEND LONGITUDDINALLY FOR THE FULL CROSSING CONDUIT TRENCH WIDTH.**
NOTE:
EXISTING PIPE MAY BE FRAGILE. USE EXTREME CAUTION WHEN REMOVING SOIL FROM EXTERIOR OF EXISTING PIPE TO AVOID DAMAGE.
NOTES:

1. SEE STANDARD DRAWING RW17 FOR TRENCH WIDTH.

2. TEMPORARY SUPPORTS SHALL BE USED TO SUPPORT PIPE WHEN PLACING CONCRETE. TO AVOID FUTURE CONCENTRATED LOADS, SUPPORTS SHALL BE REMOVED OR SHALL BE SHAPED TIMBERS WITH 1/2-INCH EXPANSION JOINT MATERIAL PADDING.

3. ABOVE DETAIL (12" THICK WITH 2 SETS OF REBAR) IS FOR CONCRETE ENCASEMENT FOR STRUCTURAL LOADING OR THRUST RESTRAINT APPLICATIONS. FOR PIPE CONCRETE ENCASEMENT ONLY, THE MINIMUM THICKNESS CAN BE REDUCED TO 6-INCHES MINIMUM AND ONLY ONE SET OF REBAR.

4. DUCTILE IRON PIPE SHALL BE WRAPPED WITH 8-MIL POLYETHYLENE ENCASEMENT PRIOR TO PLACEMENT OF CONCRETE ENCASEMENT.

5. ALL PIPE IDENTIFICATION SHALL BE ATTACHED TO PIPE PRIOR TO THE PLACEMENT OF CONCRETE ENCASEMENT.
COMpletely fill with concrete and round off top with grout plug.

4" SCH. 40 STEEL pipe, grind smooth all rough areas and edges. See note 1.

Top of finish grade for surface material.

Non-reinforced concrete encasement.

1/4" SLOPE MIN. Dia.

NOTES:
1. Paint with two coats OSHA safety yellow.
2" SCH. 40 STEEL PIPE: GRIND SMOOTH ALL ROUGH AREAS AND EDGES

TOP OF FINISH GRADE FOR SURFACE MATERIAL

1/4" SLOPE

3'-6"

MIN. DIA.

1'-6"

NON-REINFORCED CONCRETE ENCASEMENT

WEST BASIN MUNICIPAL WATER DISTRICT

SIGN POST

RW27
YELLOW OR BROWN CARBONITE UTILITY MARKER CIB-380 OR EQUAL

FINISH GRADE

SPRING LOADED STEEL BARB, FACTORY ATTACHED WITH RIVETS

NOTES:

1. LOCATE MARKER POST AT EVERY HORIZONTAL ANGLE POINT EACH 300 FEET OF HORIZONTAL CURVE.
   AND AT A MAXIMUM SPACING OF EVERY 300 FEET BETWEEN ANGLE POINTS AND CURVE POINTS.

2. THE ENGINEER SHALL DETERMINE WHICH SIDE AND EXACT LOCATION OF EACH MARKER POST.

3. USE ONLY OUTSIDE STREET RIGHTS-OF-WAY.

WEST BASIN MUNICIPAL WATER DISTRICT
MARKER POST

REVISION DRAWN APP'D. DATE

JUNE 2003 2021

APPROVED

DISTRICT ENGINEER RCE DATE
NOTES:

1. PROVIDE NEOPRENE WAFFLE ISOLATION PAD, SIMILAR TO MASON TYPE "W" OR KORFUND KORPAD 40, UNDER SUPPORT FOOT WHEN PIPING IS ISOLATED OR SUPPORT IS ADJACENT TO MECHANICAL EQUIPMENT.

2. FOR BASE HEIGHT AND FLANGE DIMENSIONS, SEE TABLE BELOW.

3. ALL PIPE SUPPORT COMPONENTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION, WITH THE EXCEPTION OF THE SADDLE AND THREADED STAINLESS STEEL PARTS.

### DIMENSION TABLE

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>MIN.</th>
<th>MAX.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1/2&quot;</td>
<td>2-1/2&quot;</td>
<td>3-1/2&quot;</td>
<td>9&quot;</td>
<td>1-1/2&quot;</td>
<td>8&quot;</td>
<td>13&quot;</td>
</tr>
<tr>
<td>3&quot;</td>
<td>2-1/2&quot;</td>
<td>3-3/4&quot;</td>
<td>9&quot;</td>
<td>1-1/2&quot;</td>
<td>8-1/4&quot;</td>
<td>13-1/4&quot;</td>
</tr>
<tr>
<td>3-1/2&quot;</td>
<td>2-1/2&quot;</td>
<td>4&quot;</td>
<td>9&quot;</td>
<td>1-1/2&quot;</td>
<td>8-1/2&quot;</td>
<td>13-1/2&quot;</td>
</tr>
<tr>
<td>4&quot;</td>
<td>3&quot;</td>
<td>4-1/4&quot;</td>
<td>9&quot;</td>
<td>2-1/2&quot;</td>
<td>9-1/4&quot;</td>
<td>14&quot;</td>
</tr>
<tr>
<td>5&quot;</td>
<td>3&quot;</td>
<td>4-7/8&quot;</td>
<td>9&quot;</td>
<td>2-1/2&quot;</td>
<td>10&quot;</td>
<td>14-3/4&quot;</td>
</tr>
<tr>
<td>6&quot;</td>
<td>3&quot;</td>
<td>5-1/2&quot;</td>
<td>9&quot;</td>
<td>2-1/2&quot;</td>
<td>10-1/2&quot;</td>
<td>15-1/4&quot;</td>
</tr>
<tr>
<td>8&quot;</td>
<td>3&quot;</td>
<td>5-7/8&quot;</td>
<td>9&quot;</td>
<td>2-1/2&quot;</td>
<td>11-1/4&quot;</td>
<td>16-1/2&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>3&quot;</td>
<td>6-1/2&quot;</td>
<td>9&quot;</td>
<td>2-1/2&quot;</td>
<td>13-1/2&quot;</td>
<td>18-1/4&quot;</td>
</tr>
<tr>
<td>12&quot;</td>
<td>3&quot;</td>
<td>9-1/4&quot;</td>
<td>9&quot;</td>
<td>2-1/2&quot;</td>
<td>15&quot;</td>
<td>19-3/4&quot;</td>
</tr>
</tbody>
</table>

WEST BASIN MUNICIPAL WATER DISTRICT

PIPE SUPPORT

AND DIMENSION TABLE

STANDARD DRAWING

RW29
VERTICAL OFFSET PROFILE

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CONSTRUCTION NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CONSTRUCT MINIMUM CLASS 350 DUCTILE IRON PIPE, SIZE AS NECESSARY TO MATCH EXISTING MAIN.</td>
</tr>
<tr>
<td>B</td>
<td>CONSTRUCT 45° BEND (MJ X MJ) WITH MEGALUG JOINT RESTRAINTS AT EACH END.</td>
</tr>
<tr>
<td>C</td>
<td>CONSTRUCT THRUST BLOCK WITH VERTICAL BEND ANCHOR PER STD. DWG RW19.</td>
</tr>
<tr>
<td>D</td>
<td>IF EXISTING MAIN IS ASBESTOS-CEMENT (A.C.) PIPE, CONNECT D.I. PIPE TO EXISTING A.C. PIPE USING AN APPROVED D.I. TO A.C. TRANSITION COUPLING, A 2 FOOT SECTION OF D.I. PIPE, AND MEGALUG RESTRAINTS. DO NOT TIE ONTO EXISTING A.C. PIPE WITH MEGALUG RESTRAINTS.</td>
</tr>
<tr>
<td>E</td>
<td>CONSTRUCT WATER PIPE CASING PER STD. DWG RW20.</td>
</tr>
</tbody>
</table>

NOTES:
1. RECYCLED WATER MAIN CONSTRUCTION SHALL COMPLY WITH CALIFORNIA CODE OF REGULATIONS TITLE 22, CALIFORNIA WATER WORKS STANDARDS, CHAPTER 16 AND DWG SEPARATION REQUIREMENTS. SEE STD DWG RW21
2. ALL BURIED IRON SHALL BE WRAPPED WITH 1 LAYER OF 10 MIL POLYETHYLENE SHEETING TAPE IN PLACE.
3. ALL BURIED NUTS AND BOLTS SHALL BE TYPE 316 STAINLESS STEEL.
4. NO UNRESTRAINED JOINTS BETWEEN FITTINGS.
5. WEST BASIN CAN NOT GUARANTEE A COMPLETE SHUT DOWN OF EXISTING MAIN, WEST BASIN WILL ATTEMPT TO SHUT DOWN MAINS AS COMPLETELY AS POSSIBLE; HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DWATERING AND ISOLATION FOR TESTING PURPOSES.
6. THIS STANDARD DRAWING SHALL APPLY ONLY TO 12” AND SMALLER RECYCLED WATER MAINS. OFFSETS IN LARGER RECYCLED WATER MAINS MUST BE DESIGNED BY A REGISTERED CIVIL ENGINEER AND APPROVED BY THE DISTRICT.
**CONSTRUCTION ITEMS / MATERIALS LIST**

<table>
<thead>
<tr>
<th>NO.</th>
<th>SIZE AND DESCRIPTION</th>
<th>MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D.I. REDUCER (IF NEEDED)</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>SPOOL - PVC OR MATCH NEW MAIN MATERIAL</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>COUPLING</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>D.I. CAP</td>
<td>---</td>
</tr>
</tbody>
</table>

**WEST BASIN MUNICIPAL WATER DISTRICT**

**CUT/CAP AND PLUG INSTALLATION**

**TIE-IN CONNECTION INSTALLATION**

**NOTES:**
1. DRAIN WATERLINE COMPLETELY BEFORE PLUGGING. ALL WATER DRAINED FROM PIPELINE SHALL BE DISCHARGED INTO A SEWER SYSTEM.
2. CAP, PLUG, OR BLIND FLANGE PER FIELD CONDITIONS.
3. PIPES 10" IN DIAMETER AND LARGER TO BE ABANDONED IN PLACE SHALL BE FILLED WITH SLURRY.

**CUT/CAP AND PLUG**

**NOTE:**
IF EXISTING PIPE IS ACP, INSTALL LONG BODY FLEXIBLE TRANSITION COUPLING IN LIEU OF MJ SLEEVE.
SLOPE ANCHORS

**NOTES:**

1. PIPE ANCHORS REQUIRED ON ALL SLOPES OF 20% OR GREATER.

2. ANCHOR SHALL EXTEND 12" INTO NATURAL UNDISTURBED SOIL.

3. CONCRETE SHALL BE CLASS 560-C-3250

4. ANCHORS FOR TRAPEZOIDAL TRENCH SECTIONS WILL CONFORM TO TRENCH CROSS SECTION AND EXTEND 12" INTO UNDISTURBED SOIL.

**TABLE**

<table>
<thead>
<tr>
<th>PIPE SLOPE</th>
<th>DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% TO 35%</td>
<td>.36'</td>
</tr>
<tr>
<td>35% TO 50%</td>
<td>24'</td>
</tr>
<tr>
<td>&gt; 50%</td>
<td>16'</td>
</tr>
</tbody>
</table>

**REINFORCING STEEL PATTERN**

**SECTION A-A**

**SECTION B-B**

**CONCRETE ANCHOR WIDTH**

**TRENCH WIDTH**

---

WEST BASIN MUNICIPAL WATER DISTRICT

SLOPE ANCHORS

STANDARD DRAWING

RW32

**REVISION**

NEW 2021

**DRAWN**

**APPROD.**

**DATE**

**DISTRICT ENGINEER**

RCE

**DATE**
NOTES:

1. CONTRACTOR SHALL REMOVE THE SECTION OF EXISTING STORM DRAIN PIPE AS SHOWN ABOVE AND CLEAN BOTH ENDS AS REQUIRED FOR THE PLUGS.

2. THE ACTUAL INVERTS OF THE EXISTING PIPE AND THE NEW MAIN PIPELINE MAY BE DIFFERENT THAN SHOWN.

3. THE CONTRACTOR SHALL PROVIDE ADEQUATE WOOD BRACING WITH WEDGES AS REQUIRED TO WITHSTAND THE CONTROL DENSITY FILL FORCE. AT THE CONTRACTOR'S OPTION, A DIFFERENT BRACED PLUG SYSTEM MAY BE SUBMITTED FOR REVIEW.

4. THE EXTERNAL PLYWOOD PLUGS SHALL BE BACKFILLED TO THE CROWN OF EXISTING PIPE PRIOR TO FILLING WITH ONE SACK SLURRY.

5. THE CONTRACTOR SHALL DRILL TWO FILL HOLES AS REQUIRED AT THE TOP OF EACH EXISTING PIPE. THE EXISTING PIPE SECTION SHALL BE FILLED WITH ONE SACK SLURRY UNTIL IT COMES OUT OF THE HOLES.
NOTES:
1. CONTRACTOR SHALL CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 20 PSI AIR PRESSURE. IF LEAKS ARE DETECTED, REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG HOLES AT COMPLETION OF TESTS AND COAT WITH BRASS PLUG OR WELD.
2. CEMENT MORTAR LINING AND COATING PER AWWA C-205
3. TYPICAL HANDHOLES REQUIRED ON PIPE SMALLER THAN 24" IN DIAMETER
4. MINIMUM OF TWO HANDHOLES REQUIRED FOR EACH BUTT STRAP

WEST BASIN MUNICIPAL WATER DISTRICT

BUTT STRAP JOINT
FOR CML & C STEEL PIPE

REVISION | DRAWN | APP'D. | DATE
--- | --- | --- | ---
JUNE 2003 | 2021 | | |

APPROVED

DISTRICT ENGINEER | RCE | DATE
--- | --- | ---
| | | |

STANDARD DRAWING
RW35
NOTES:

1. MORTAR LINING AND COATING SHALL BE IN ACCORDANCE WITH AWWA C-205.

2. "L" INDICATES THE THICKNESS OF THE STEEL PIPE AT THE STATION WHERE USED.

3. PIPELINE MANUFACTURER SHALL PERFORM THE FOLLOWING COLLAR LEAK TEST PROCEDURES:
   a. DRILL AND TAP 1/4" NPT HOLE BEFORE WELDING.
   b. CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 20 PSI AIR PRESSURE.
   c. IF LEAKS ARE DETECTED REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS.
   d. PLUG HOLE ON COMPLETION OF TESTS AND COAT AS SPECIFIED.

4. LARGER SIZE OUTLETS REQUIRE SPECIAL DESIGN.

<table>
<thead>
<tr>
<th>OUTLET NOMINAL SIZE (IN)</th>
<th>OUTLET O.D. (IN)</th>
<th>COLLAR THICKNESS (IN)</th>
<th>WIDTH (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4-1/2</td>
<td>1/4</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>6-5/8</td>
<td>1/4</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>8-5/8</td>
<td>1/4</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>10-3/4</td>
<td>1/4</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>12-3/4</td>
<td>1/4</td>
<td>5</td>
</tr>
</tbody>
</table>

WEST BASIN MUNICIPAL WATER DISTRICT

4- TO 12-INCH OUTLET DETAIL
CML & C STEEL PIPE
NOTES:

1. ALL COATING DAMAGED OR REMOVED FOR INSTALLATION OF THE SERVICE TAP SHALL BE REPLACED TO ITS ORIGINAL CONDITION UPON COMPLETION.

2. MORTAR COATING SHALL BE IN ACCORDANCE WITH AWWA C-205
NOTES:

1. ABOVE GRADE INSULATING FLANGE INSTALLATION SHOWN.

2. FOR BURIED OR SUBMERGED SERVICE, DELETE INSULATING WASHER ON PROTECTED SIDE OF INSULATING FLANGE.

3. AFTER ASSEMBLY, TEST FOR INSULATION AND APPLY PROTECTIVE COATING AS SPECIFIED.

4. USE HALF WIDTH SLEEVES AT THREADED FLANGE BOLTS (I.E. AT BUTTERFLY VALVE BONNET)

5. INSULATING MATERIALS:
   - GASKET – TYPE “E” NEOPRENE FACED PHENOLIC
   - SLEEVE – LAMINATED G-10 GLASS
   - WASHER – LAMINATED G-10 GLASS SHEET
2" AND SMALLER

**NOTE:**
REMOVE ABANDONED WATER METER BOX (SEE NOTE NO. 1 BELOW) AND REMOVE AND DISPOSE COPPER SERVICE PIPE TO THE 90° ELBOW OR END OF SWEEP BELOW GROUND. INSTALL BRASS PLUG ON REMAINING END OF COPPER SERVICE PIPING.

4" AND LARGER

**FLANGED TEE**

**NOTE:**
WHEN EXISTING TEE BRANCH HAS A PUSH-ON OR MECHANICAL JOINT, INSTALL DUCTILE IRON PLUG (RESTRAINED) AND THRUST BLOCK.

**NOTE:**
1. REMOVE METER BOX AND RESTORE HARDSCAPE/LANDSCAPE PER PURVEYOR REQUIREMENTS
1. STATIONS SHOWN ARE ALONG THE CENTERLINE OF THE PIPELINE.
2. ELEVATIONS SHOWN ON PIPELINE PROFILE APPLY TO INVERT OF PIPE OR INVERTS AT POINTS OF INTERSECTION OF SLOPE CHANGES.
3. THE CONTRACTOR SHALL ADD FITTINGS AS REQUIRED TO AVOID EXISTING UTILITIES ENCOUNTERED. ANY CHANGE IN PROFILE SHALL BE APPROVED BY THE ENGINEER.
4. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT 1–800–442–4133 OR 811 AT LEAST 48 HOURS PRIOR TO STARTING WORK.
5. THE CONTRACTING OFFICER REPRESENTATIVE INSPECTOR SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION OR ANY INSPECTION.
6. USE THRUST BLOCKS AT ALL LOCATIONS INDICATED ON THE PLANS OR AT ALL BENDS AND REDUCERS.
7. ALL WORK IS TO BE DONE PER "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREEN BOOK) 2018 EDITION, AND THE DISTRICT'S STANDARD SPECIFICATIONS AND DRAWINGS UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS AND THE STANDARD SPECIFICATIONS ON THE JOB AT ALL TIMES.
8. THE TOP OF RECYCLED WATER MAINS SHALL BE A MINIMUM OF 42-INCHES BELOW STREET PAVEMENT OR FINISHED GRADE FOR 12-INCH AND SMALL DIAMETER PIPELINES AND 48-INCHES FOR PIPELINES LARGER THAN 12-INCHES. IF THE MINIMUM COVER CAN NOT BE MET, THE PIPELINE SHALL BE ENCASED IN CONCRETE. AT NO TIME SHALL THERE BE LESS THAN 36-INCHES OF COVER FROM TOP OF PIPE TO EXISTING GROUND DURING CONSTRUCTION.
9. ALL CONCRETE SHALL BE CLASS 560–C–3250 AND CONCRETE WORK SHALL BE PER PLANS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
11. PIPELINES SHALL BE FIELD PRESSURE–TESTED IN ACCORDANCE WITH SEC. 306–B.5.2 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," 2018 EDITION, TO THE MINIMUM TEST PRESSURE INDICATED BELOW OR AS INDICATED ON THE PLANS:

<table>
<thead>
<tr>
<th>PIPE CLASS</th>
<th>MINIMUM TEST PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>

12. CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND NUISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY CLEAN–UP OF ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION.
13. ALL SURPLUS MATERIAL REMOVED, INCLUDING EXCAVATED MATERIALS, WHICH ARE NOT SUITABLE FOR USE IN THIS PROJECT SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER AND AT LOCATION ACCEPTABLE TO ALL COGNIZANT AGENCIES.
14. THE CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE PREPARATION OF SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL BE LIABLE FOR ANY ADDITIONAL COST REQUIRED IN THE EVENT THAT HE HAS NOT CORRECTLY LOCATED THE EXISTING UTILITIES.
15. ALL BURIED BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL AND COATED IN ACCORDANCE WITH THE SPECIFICATIONS.
16. THE CONTRACTOR SHALL CONFINE ALL OF HIS ACTIVITIES TO THE AREAS WITHIN THE EXISTING AND PROPOSED STREET RIGHT–OF–WAY AND DISTRICT'S PROPERTY OR EASEMENTS SHOWN ON THESE PLANS UNLESS HE OBTAINS WRITTEN CONSENT FROM THE PROPERTY OWNER.
17. CONTRACTOR SHALL REPLACE ALL SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION.
18. THE CONTRACTOR SHALL PROTECT IN PLACE EXISTING SEWER, GAS, WATER LATERALS AND OTHER UTILITIES OR REPLACE IN KIND. LOCATIONS OF EXISTING UTILITIES AND SUB–STRUCTURES SHOWN ON THE DRAWINGS ARE APPARENT ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS, AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION IN THE AREA OF THE SPECIFIC SUB–STRUCTURE.
19. ALL BURIED VALVES OR VESSELS SHALL BE PROVIDED WITH RISERS, VALVE BOXES, AND COVERS PER DISTRICT STANDARD SPECIFICATIONS AND STANDARD DRAWINGS.
20. SHUTDOWN OF EXISTING LINES TO FACILITATE CONNECTION TO EXISTING FACILITIES SHALL BE COORDINATED WITH THE CONTRACTING OFFICER REPRESENTATIVE AND THE DISTRICT.
21. CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POINTS OF CONNECTION PRIOR TO SUBMITTING PAYMENT DRAWINGS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES, PAVEMENT, CURB, TRAFFIC STRIPING AND MARKINGS, TRAFFIC DETECTOR LOOPS, STRUCTURES, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS AS A RESULT OF HIS OPERATIONS, AND WILL BE REQUIRED TO REPAIR OR REPLACE SAME TO THE SATISFACTION OF, AND AS DIRECTED BY, THE CONTRACTING OFFICER REPRESENTATIVE OR IMPACTED UTILITY COMPANY.
23. ALL CONSTRUCTION SURVEYS FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE. SURVEY POINTS DESTROYED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE PROPER PROTECTION, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
24. THE CONTRACTOR IS TO MAINTAIN AND PROVIDE THE DISTRICT WITH A "RECORD" SET OF AS–BUILT DRAWINGS AT THE COMPLETION OF ALL WORK PER THE PLANS AND SPECIFICATIONS.
25. ALL TRAFFIC SIGNAL LOOPS AND LOOPS HAVE NOT BEEN SHOWN ON THESE PLANS. CONTRACTOR SHALL DETERMINE LOCATION OF ALL IMPACTED FACILITIES AND REPLACE ALL TRAFFIC SIGNAL CONDUITS AND LOOPS DAMAGED OR REMOVED DURING CONSTRUCTION.
26. EXISTING OVERHEAD SOUTHERN CALIFORNIA EDISON POWER LINES AND OVERHEAD STREET LIGHT POWER LINES HAVE NOT BEEN SHOWN ON PLANS. CONTRACTOR SHALL IDENTIFY AND PROTECT ALL EXISTING OVERHEAD AND BELOW GRADE UTILITIES.
27. POTHOLE DATA PROVIDED IS FOR DESIGN PURPOSES AND IS SHOWN AS APPROXIMATE ELEVATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL UTILITY LOCATIONS.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND ACQUIRING STAGING OR MATERIAL STOCKPILE AREAS, SUBJECT TO APPROVAL OF THE DISTRICT.

**WEST BASIN MUNICIPAL WATER DISTRICT**

**STANDARD RECYCLED WATER SYSTEM NOTES**

**REVISION**

**DRAWN**

**APP'D.**

**DATE**

**APPROVED**

**DISTRICT ENGINEER**

**RCE**

**DATE**