ENGINEER’S LIST OF APPROVED ITEMS
FOR USE WITH WATER DISTRIBUTION SYSTEM
DESIGN & CONSTRUCTION STANDARDS
VERSION DATE: OCTOBER 2018

EFFECTIVE: OCTOBER 18, 2018

All Standards as Applicable – (See Water Distribution Design Standards and Construction Specifications for additional information and direction)

Mechanical Joint Solid Sleeve
- Tyler Union
- Star
- Sigma
- U.S. Pipe

Couplings
- Ford Ultra-Flex
- Romac XR501
- Smith-Blair Quantum Series
- Hymax 860 Series

Standard 857 - Fire Hydrant and Lateral

Hydrants
- Residential (All 1-2½" & 1-4½" outlet)
  - Clow F-75
  - Clow F-950
- Commercial (All 1-2½" & 2-4½" outlet)
  - Clow 865

Hydrant Break-Off Check Valve Assembly
- Clow LBI 400A

Coatings
- Benjamin Moore & Co. DTM Acrylic Gloss Enamel, M28
- Kelly Moore DTM Acrylic Gloss Enamel, 5780
- Sherwin Williams DTM Acrylic Coating, B66-100

Standard 858 - Typical Pumper Connection Detail

Low Profile Hydrant
- Clow F-92 (2- 2½" & 1-4½" outlet)

Hydrant Break-Off Check Valve Assembly
- Clow LBI 400A

Coatings
- Benjamin Moore & Co. DTM Acrylic Gloss Enamel, M28
- Kelly Moore DTM Acrylic Gloss Enamel, 5780
- Sherwin Williams DTM Acrylic Coating, B66-100
Standard 861 – Permanent Blow-Off

2" Brass Ball Valve (FIP x FIP)
  Ford       B11-777W-NL
  Jones      E-1900W
  McDonald   76101W
  Mueller    B-20200N

3" Brass Ball Valve (FIP x FIP)
  Watts     LFB-6000
             LFFBV-3C
  Nibco     T-FP-600A-LF

<table>
<thead>
<tr>
<th>Size</th>
<th>Location</th>
<th>Box Number</th>
<th>Cover Number</th>
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<td>Christy B1324</td>
<td>Christy B1324-51JH</td>
</tr>
<tr>
<td>2&quot; &amp; 3&quot;</td>
<td>Nontraffic</td>
<td>Christy N30</td>
<td>Christy N30R</td>
</tr>
</tbody>
</table>

Boxes & Covers

Standard 862 - 8" Blow-off

2" Brass Ball Valve (FIP x FIP)
  Ford       B11-777W-NL
  Jones      E-1900W
  McDonald   76101W
  Mueller    B-20200N

3" Brass Ball Valve
  Watts     LFB-6000
             LFFBV-3C
  Nibco     T-FP-600A-LF

<table>
<thead>
<tr>
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<td>8&quot;</td>
<td>Nontraffic</td>
<td>Christy N40</td>
<td>Christy B40-61D</td>
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</table>

Boxes & Covers

Standard 863-A, B, C & D - 1" & 1-1/2" Water Service Lateral for 5/8" x 3/4" & 1" Meters

Angle Meter Ball Valve - Compression x Meter Swivel Nut
  Ford       BA43-342W-Q-NL – 1” x 3/4”(5/8”)
Jones E-1963WSG
McDonald 74602BQ
Mueller B-24258N

**Angle Meter Ball Valve** - FIP x Meter Swivel Nut

Ford BA13-332W-NL 3/4"
BA13-444W-NL 1"
Jones 1966W
McDonald 74604B
Mueller B-24265N

**Corporation Stop** (AWWA/CC Taper Thread Inlet x Compression CTS)

Ford FB1000-4-Q-NL - 1"
FB1000-6-Q-NL - 1-1/2"
Jones E-3401SG - 1"
E19375SG - 1" & 1-1/2"
McDonald 74701BQ
Mueller B-25008N

**Tapping Service Saddle** (AWWA/CC tap) for;

<table>
<thead>
<tr>
<th>C-900 Pipe</th>
<th>Ford</th>
<th>202BS</th>
<th>FC202</th>
<th>FS303</th>
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<tbody>
<tr>
<td></td>
<td>Jones</td>
<td>J 969 Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>McDonald</td>
<td>3845</td>
<td>3855</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mueller</td>
<td>DR 2 S Series</td>
<td>BR 2 S Series</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Romac</td>
<td>202BS</td>
<td>202NS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smith-Blair</td>
<td>317</td>
<td>393</td>
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**Ductile Iron Pipe**

<table>
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<tr>
<th>Cascade</th>
<th>Ford</th>
<th>202BS</th>
<th>FC202</th>
<th>FS303</th>
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<tr>
<td></td>
<td>McDonald</td>
<td>3825</td>
<td>4845A</td>
<td>4855A</td>
</tr>
<tr>
<td></td>
<td>Mueller</td>
<td>DR 2 S Series</td>
<td>BR 2 S Series</td>
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</tr>
<tr>
<td></td>
<td>Romac</td>
<td>202BS</td>
<td>202NS</td>
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</tr>
<tr>
<td></td>
<td>Smith-Blair</td>
<td>317</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Existing ACP**
Ford  
McDonald  
4845A  
4855A  
Mueller  
DR 2 Series  
BR 2 Series  
Romac  
302NS  
Smith-Blair  
317  

**Meter Boxes and Covers**
(MOUSE HOLES IN METER BOXES NOT ALLOWED)
PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

*All water meter box covers shall be constructed from a traffic rated composite material with a 2” diameter bore all the way through the lid, and a 4-1/8” diameter by 5/16” deep counter-bore centered over the 2” bore to accommodate Automated Meter Reading (AMR) equipment. The bore holes shall be set toward a corner of the box in a manner that does not weaken the traffic rating. Contact the Santa Rosa Water Department if additional information is needed to comply with these requirements. Lid shall be constructed specifically for box used on.

**Cover may require field modification to accommodate AMR equipment. Contact Water Department for direction.

Standard 864 – 1-1/2” Dual Water Service Lateral

U-Branch Assembly (Compression x MIP)
Ford
U48-63-G-NL (7-1/2” spacing w/Grip Nut)
U48-64-9-Q-NL (9” spacing w/Quick Nut)

Jones
E-2629SG

McDonald
708UQM

Mueller
H-15363N

**Angle Meter Ball Valve (FIP x Meter Swivel Nut)**
3/4” Inlet x 5/8” x 3/4” Outlet

Ford
BA13-332W-NL

Jones
E-1966W

McDonald
74604B

Mueller
B-24265N

1” Inlet x 5/8” x 3/4” Outlet

Ford
BA13-342W-NL

McDonald
74604B

Mueller
B-24265N

**Angle Meter Ball Valve (Compression x Meter Swivel Nut)**
3/4”

Ford
BA43-332W-Q - 3/4”

Jones
E-1963WSG

McDonald
74602BQ

Mueller
B-24258N

**Meter Boxes & Covers**
(MOUSE HOLES IN METER BOXES NOT ALLOWED)
PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER
DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

<table>
<thead>
<tr>
<th>Size</th>
<th>Location</th>
<th>Box Number</th>
<th>Cover Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2”</td>
<td>Non-Traffic</td>
<td>Christy N24</td>
<td>*See Note under Standard 863A</td>
</tr>
<tr>
<td>HDPE or 1” Cu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-1/2”</td>
<td>Traffic</td>
<td>2ea - Christy B1730</td>
<td>**See Note under Standard 863A</td>
</tr>
<tr>
<td>HDPE or 1” Cu</td>
<td></td>
<td>***(one meter each box)</td>
<td>Solid Steel Checker Plate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Flush mount</td>
</tr>
</tbody>
</table>

*** Construction of service manifold shall be submitted to the Water Department for Review & Approval

**Standard 865-A & 865-B - 2” Water Service Lateral for 2” or 1 ½” Meter**

2” Angle Ball Valve (FIP x Meter Flange)

Ford
BFA13-777W-NL

McDonald
74604B

Mueller
B-24286N
2" Angle Ball Valve (Compression x Meter Flange)
   Jones          E-1975WSG
   McDonald       74602BQ
   Mueller        B-24276N

2" Coupling (MIP x Compression)
   Ford           C84-77-Q-NL
   Jones          E-2605SG
   McDonald       74753Q
   Mueller        H-15428N

2" 90° Elbow (Compression x Compression)
   Ford           L44-77-Q-NL
   Jones          E-2611SG
   McDonald       74761Q
   Mueller        H-15526N

2" Straight Coupling (Compression x Compression)
   Ford           C44-77-Q-NL
   Jones          E-2609SG
   McDonald       74758Q
   Mueller        H-15403N

2" Resilient Seated Gate Valve (NPT Ends)
   American Flow Control Series 2500-1
   AVK             Series 03-NPT
   Clow            F-6103
   Mueller         A-2360 (Cast Iron Body)

Tapping Service Saddle
   Refer to Approved List for Standard 863.

Meter Boxes & Covers
(MOUSE HOLES IN METER BOXES NOT ALLOWED)
PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER
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<th>Size</th>
<th>Location</th>
<th>Box Number</th>
<th>Cover Number</th>
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</thead>
<tbody>
<tr>
<td>2&quot; service in meter box</td>
<td>Non-Traffic</td>
<td>Christy N36 w/tier</td>
<td>*See Note under Standard 863A</td>
</tr>
<tr>
<td>2&quot; service in meter box</td>
<td>Traffic</td>
<td>Christy B1730 w/tier</td>
<td>**See Note under Standard 863A - Solid Steel Checker Plate - Flush mount</td>
</tr>
</tbody>
</table>

Standard 866 - 4" Water Service Lateral for 3" Meter

Standard 867 - 4" Water Service Lateral for 4" Meter

Tapping Sleeves
   Refer to Approved List for Standard 878
**Meter Boxes & Covers**

PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

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<th>Size</th>
<th>Location</th>
<th>Box Number</th>
<th>Cover Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; &amp; 4&quot;</td>
<td>Non-Traffic</td>
<td>Christy N52 w/tier</td>
<td>Composite Cover supplied by Contractor per approval of Water Department.</td>
</tr>
<tr>
<td>3&quot; &amp; 4&quot;</td>
<td>Traffic</td>
<td>Christy N52 w/tier</td>
<td></td>
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*Covers to have probe hole per Standard 863A*

**Standard 868 - 6" Water Service Lateral for 6" Meter**

**Tapping Sleeves**

Refer to Approved List for Standard 878.

**Meter Boxes & Covers**

PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

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<tr>
<th>Size</th>
<th>Location</th>
<th>Box Number</th>
<th>Cover Number</th>
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</thead>
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<tr>
<td>6&quot;</td>
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<td>Christy N52 w/tier</td>
<td>Composite Cover supplied by Contractor per approval of Water Department.</td>
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<tr>
<td>6&quot;</td>
<td>Traffic</td>
<td>Christy N52 w/tier</td>
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</table>

*Covers to have probe hole per Standard 863A*

**Standard 872 - Water Main Encasement and End Seal**

**Casing Spacers**

Calpico Inc. The Model M Series
Cascade Model CCS

**Standard 875 - Below Ground Double-Check Valve Backflow Device**

**Boxes & Covers**

PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

Boxes and covers in areas where vehicular traffic may occur shall have an AASHTO H20 rating, and must be submitted to the Water Department for review and approval. Installations shall be per manufacturer’s instructions with box & cover flush with surrounding grade when in the travelled way

<table>
<thead>
<tr>
<th>Backflow Size</th>
<th>Location</th>
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<th>Cover Number</th>
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<tr>
<td>3/4&quot; &amp; 1&quot;</td>
<td>As reqd.</td>
<td>Christy N30</td>
<td>Christy N30R</td>
</tr>
<tr>
<td>2&quot;</td>
<td>As reqd.</td>
<td>Christy N36</td>
<td>Christy N36R</td>
</tr>
</tbody>
</table>
Standard 877 - Gate Valve

Valve Box
Bes G4
Brooks 4TT
Christy G4

Gate Valves
Except where otherwise specified gate valves shall be ductile iron conforming to the latest revision of AWWA Standard C-509 & 515 covering resilient seated gate valves. (For example: Clow, Mueller, US Pipe, American Flow Control)

Standard 878 - Butterfly Valve & Tapping Valve

Tapping Sleeves (Stainless Steel) - 4" & larger
Size on size up to and including 8" on 8" (examples: 4" on 4", 6" on 6") and any combinations (examples: 4" on 8", 6" on 8")
DIP, CIP, PVC, and Existing ACP:(Sleeve must be compatible with pipe type).
Dresser Style 630
Ford FTSS
JMC 415
JCM 432
Mueller H-304
Powerseal 3490
Romac SST111
Smith-Blair 663, 664 & 665

For taps smaller than 4", see Appropriate Standard

Standard 879 - Single Check Detector Assembly in Vault

Detector Check Valve
Ames 1000 DCV
Hersey EDC III
Hersey EDC IV

Precast Vault and Cover
per approval of Utilities Department
(Pedestrian Walkways must have Algrrip surface)

Standard 880 - Double Check Detector Fire Line Backflow Assembly

Standard 881 - Pressure Reducing Valves

Valves
CLA-VAL 90-01
Singer 206-PRC
Watts PV-10-01

Precast Vault and Cover
Refer to Approved List for Standard 879.
Standard 882 - Surge Anticipator Valve or Pressure Relief Valve

Tapping Sleeves
Refer to Approved List for Standard 878.

Utility Box and Cover (Non-traffic Loading)

Boxes & Covers
PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

Installations shall be per manufacturer’s instructions with box & cover flush with surrounding grade when in the travelled way

<table>
<thead>
<tr>
<th>Box Number</th>
<th>Cover Number</th>
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</thead>
<tbody>
<tr>
<td>Christy N48</td>
<td>Christy B48-62D</td>
</tr>
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</table>

Standard 883 - Air & Vacuum / Air Release Valve

Tapping Service Saddle
Refer to Approved List for Standard 863.

1" Ball Valve Curb Stop (FIP x FIP)
Ford B11-444W-NL
Jones E-1900W
McDonald 76101W
Mueller B-20200N

1" Corporation Stop (AWWA/CC Taper Thread Inlet x MIP or FIP)
Ford FB 400-4-NL
Ford FB1600-4-NL
Jones E-45
    J-51
McDonald 73128B
    73148B
Mueller B-20045N
    B-2996N

1" 90° brass elbow (MIP x Compression)
Ford L84-44-Q-NL
Jones E-2619SG
McDonald 74779MQ
Mueller H-15531N

1" 90° brass elbow (FIP x Compression)
Ford L14-44-Q-NL
Jones E-2621SG
McDonald 74779Q
Mueller H-15533N

Combination Valves
APCO 143C
Crispin UL10
Valmatic VM-201C

Above ground relief pedestal
Various TV80 Enclosure

Bug Screen
Flow Ezy “M8” Pipe mounted suction screen

Boxes & Covers (Non-Traffic)
PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

Boxes and covers in areas where vehicular traffic may occur shall have an AASHTO H2O rating, and must be submitted to the Water Department for review and approval. Installations shall be per manufacturer’s instructions with box & cover flush with surrounding grade when in the travelled way

<table>
<thead>
<tr>
<th>Box Number</th>
<th>Cover Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christy N36</td>
<td>Christy N36R</td>
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</tbody>
</table>

Standard 884 - Water Meter for Private Non-residential Systems

3/4" Resetter
Ford VBB43-12W-NL

1" Resetter
Ford VBB44-15W-NL

Meter Boxes & Covers
(MOUSE HOLES IN METER BOXES NOT ALLOWED)
PROPOSED ALTERNATIVES CAN BE SUBMITTED IN WRITING TO THE WATER DEPARTMENT FOR REVIEW AND POSSIBLE ACCEPTANCE

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<th>Size</th>
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<th>Cover Number</th>
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<tbody>
<tr>
<td>5/8&quot; x 3/4&quot;</td>
<td>Traffic</td>
<td>Christy B1017</td>
<td>Christy B1017-51GH</td>
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<tr>
<td>5/8&quot; x 3/4&quot;</td>
<td>Nontraffic</td>
<td>Christy B12</td>
<td>Christy B12C</td>
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<tr>
<td>1&quot;</td>
<td>Traffic</td>
<td>Christy B1324</td>
<td>Christy B1324-51GH</td>
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<tr>
<td>1&quot;</td>
<td>Nontraffic</td>
<td>Christy N30</td>
<td>Christy N30R</td>
</tr>
</tbody>
</table>

Standard 885 - Water Meter for Private Process and Evaporative Water Lines

Resetter
5/8" x 3/4"

Ford Resetter-52-B1-NL
McDonald 740-2-MM 33
Mueller H-1412N

1"

Ford Resetter-54-NL
McDonald 740-4-MM 44
Mueller H-1412N

**Standard 886 - Water Sampling Station**

**3/8" Stainless Steel Ball Valve**
"Truline Midget"

**Aluminum Cast Cabinet**
Kupferle Model 88 Ellipse

**Standard 887 - 4" Ductile Iron Multi-Service Manifold**

**MIP x Compression Coupler 3/4", 1" and 2"**

Ford C84-33-Q-NL
C84-44-Q-NL
C84-77-Q-NL

Jones E-2605SG
McDonald 74753Q
Mueller H-15428N

**Tapping Service Saddles** for Individual Services
Refer to Approved List for Appropriate Service Lateral Std.

**Tapping Sleeves**
Refer to Approved List for Standard 878.

**Standard 888 – Above Ground Single Check Detector Assembly**

**Detector Check Valve**
Ames 1000DCV
Hersey EDC III
Hersey EDC IV

**Standard 889 - Water Service Anode**

**Magnesium Anode**
Calpico, Inc.

**APPROVED:**

[Signature]
Ben Horenstein
Director of Santa Rosa Water