



November 16, 2018

TO: GENERAL PUBLIC

RE: CITY OF ABERDEEN APPROVED LIST OF SUPPLIERS AND MATERIALS  
FOR WATER AND SEWER CONSTRUCTION

1. The Department of Public Works issues an addendum dated November 16, 2018 to the Harford County Part 27, dated Nov 10, 2014 for "Approved List of Suppliers and Materials For Water and Sewer Construction." The Changes become effective on the date noted above and are applicable within the Aberdeen's Water Distribution and Sewer Collection System for all areas that the City provides services.
2. For additional information contact the Department of Public Works at 410-272-1600 x 217

Sincerely,

A handwritten signature in black ink that reads "Kyle Torster". The signature is written in a cursive, slightly slanted style.

Kyle E. Torster, P.E.  
Director of Public Works

Cc:  
Planning and Zoning



# HARFORD COUNTY

CITY OF ABERDEEN ADDENDUM

DEPARTMENT OF PUBLIC WORKS  
DIVISION OF WATER AND SEWER



APPROVED LIST OF  
SUPPLIERS AND MATERIALS  
FOR  
WATER AND SEWER  
CONSTRUCTION

November 10, 2014

Reissued CoA Addendum November 16, 2018



**DAVID R. CRAIG**  
HARFORD COUNTY EXECUTIVE



**TIMOTHY F. WHITTIE, P.E.**  
DIRECTOR OF PUBLIC WORKS

**MARY F. CHANCE**  
DIRECTOR OF ADMINISTRATION

**JOEL V. CAUDILL, P.E.**  
DEPUTY DIRECTOR OF WATER & SEWER

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**HARFORD COUNTY GOVERNMENT**


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**DEPARTMENT OF PUBLIC WORKS  
DIVISION OF WATER AND SEWER**

**MEMORANDUM**

**DATE:** November 10, 2014

**TO:** See Distribution List

**FROM:**   
Mary F. Chance  
Director of Administration

**RE:** Revisions to Parts 25, 26, 27 and the addition of new Part 28 to the Rules and Regulations

Three parts of the Rules and Regulations of the Division of Water and Sewer have recently been revised and a new part has been added. Through public advertisement, a hearing was held on October 24, 2014 to discuss the proposed changes. Part 25- Design Guidelines, Part 26- Standard Specifications and Part 27- Approved Materials List were revised. New Part 28- Approved Contractors/Vendors for Auxiliary Water and Sewer Construction and Testing was added. The revised pages of these sections are attached.

The changes to the Rules and Regulations became effective on the date noted above. Please replace the current pages with the attached sheets in your copy of the Rules and Regulations. If you prefer, the complete document may be obtained in CD form from the Division of Water and Sewer or downloaded from the Harford County website in the next several weeks.

Enclosure  
DWI/hs

**Cc:** David R. Craig, Harford County Executive  
Kathryn L. Hewitt, Harford County Treasurer  
Margaret Hartka, Law Department  
Timothy F. Whittie, P.E., Director of Public Works  
Joel V. Caudill, P.E., Deputy Director of Water and Sewer  
Jacqueline K. Ludwig, Chief of Water and Sewer Administration and Engineering  
Darryl W. Ivins, Engineer, Division of Water and Sewer

*Preserving Harford's Past; Promoting Harford's Future*

MY DIRECT PHONE NUMBER IS 410-638-3300

3334 ABINGDON ROAD, ABINGDON, MARYLAND 21014 • Maryland Relay 711 • [www.harfordcountymd.gov](http://www.harfordcountymd.gov)

November 10, 2014

Reissued CoA Addendum November 16, 2018



The following Approved List of Suppliers and Materials for Water and Sewer Construction apply to the operation of the Division of Water and Sewer and is Part 27 of the General Rules and Regulations that are promulgated in accordance with Section 807 of the Harford County Charter.







**APPROVED LIST OF  
SUPPLIERS AND MATERIALS  
FOR  
WATER AND SEWER CONSTRUCTION  
PART 27**

**City of Aberdeen Addendum\***

HARFORD COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF WATER AND SEWER

**November 10, 2014**

**\*November 16, 2018**



HARFORD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF WATER & SEWER

GENERAL RULES AND REGULATIONS

Table of Contents

**PART 27 APPROVED LIST OF SUPPLIERS AND MATERIALS FOR WATER AND SEWER**

**CONSTRUCTION ..... 27-1**

I. WATER MAIN CONSTRUCTION ..... 27-2

II. SEWER MAIN CONSTRUCTION ..... 27-9

III. WATER AND SEWER MAIN CONSTRUCTION ..... 27-12

IV. LOW PRESSURE SEWER CONSTRUCTION..... 27-14



## **PART 27 APPROVED LIST OF SUPPLIERS AND MATERIALS FOR WATER AND SEWER CONSTRUCTION**

The Chief of Facilities shall maintain the approved materials list. The amendment of the list shall be the result of an evaluation and recommendation of a committee of operations, maintenance, and engineering staff of the Water & Sewer Division periodically designated by the Deputy Director of the Water & Sewer Division. The list shall be utilized by contractors, suppliers, designers, and County staff when identifying materials which have been approved for use in the County water and sewer systems. This list of approved materials shall be utilized in construction or maintenance when the project specifications do not contain enough detail to identify every item. This list of approved materials is to be used or referenced in designs unless a material not contained in the list is otherwise approved for use in a specification package.

The supplier of a material not on the list may request inclusion of a product by pursuing the following evaluation procedures:

1. Materials must be presented with a request for inclusion in the approved materials list. The request may initially be for an individual or limited number of projects.
2. Five (5) copies of fact sheets, specifications, laboratory test results, drawing and significant information on applicability of use of the product must be presented before a request will be considered.
3. Documentation of approval for use for the proposed application by other local, state or federal water and sewer operations and construction agencies must be presented.
4. Depending on the nature of the product, factory visits and on-site visits to locations where the material or product is being utilized in construction and/or operation may be required as part of the evaluation process.
5. If evaluation of the aforementioned information is acceptable, the product may be approved for use on a trial basis in a developer-funded or County capital project. NOTE: Large quantities or extensive use in the trial installation will normally not be allowed.
6. The County reserves the right to have the product tested by an independent agency to assure that it meets the minimum requirements established in the Standard Specifications. In the event that the product does not meet the minimum requirements, the manufacturer will be responsible for all associated cost including, but not limited to, the test performed and any additional testing by Harford County. Should the product not pass a retest, the product will be removed from the Approved Material List.
7. If the trial installation produces satisfactory results, then after an appropriate time for observation, the material or product may be utilized on a limited basis.
8. Pending continued satisfactory performance and evaluation during the trial installation and limited use periods, the material or product may be added to the list of approved suppliers.

**I. WATER MAIN CONSTRUCTION**

**1) PIPE, DUCTILE IRON (D.I.P)**

<u>Slip Joint</u>	<u>Restrained Joint</u>
U.S. Pipe & Fdy.	T.R. Flex
Griffin	Snap Lock
American	Flex Ring Super
McWane	Lock
Atlantic States	Field Lock
Clow	Foster Adapter

**Special Thickness Class**

Note:  
3" – 6" Class 52  
8" - 12" Class 52  
14" & above Class 52

**2) PIPE, POLYVINYL CHLORIDE WATER**

North American Pipe  
J.M. Eagle  
National Pipe & Plastic  
Diamond

Note:  
Rubber Ring Slip Joint Only  
3" or smaller – SDR-21-200 psi  
4"-12"-DR-14-200 psi

**3) PIPE, CAST IRON (C.I.P.)**

Not approved.

**4) PIPE, WATER SERVICE  
(3/4", 1", 1 1/2", 2")**

**Copper Tubing-Type K (All Sizes)**

Halstead  
Reading  
Cerro  
Mueller Tubing Company  
Howell Metals  
Cambridge-Lee  
AWWA Approved PE Pipe  
Copper Tubing Sized

**5) FIRE HYDRANT, 5-1/4" VALVE OPENINGS -  
MECHANICAL JOINT**

M&H Reliant Style 929  
Mueller Centurion A-423  
Kennedy Guardian K-81-A  
American B-84-B  
Clow-Medallion-F-2545  
U.S. Pipe Metropolitan 250 Model 94

**5a) YARD HYDRANTS**

Murdock M-100, M-150, M-200  
Kupferle

Note: Submit Shop Drawings for exceptions

**6) PAINT FOR FIRE HYDRANTS  
"SCHOOL BUS YELLOW"**

Sherwin-Williams - Yellow #B54Y157  
Coronado #COR80-151-1

**7) RESILIENT SEAT/WEDGE  
VALVES MECHANICAL JOINT (Flanged For  
Interior Use)**

Sizes Thru 30" (AWWA C-509-01)  
Clow Series F-6100 (4"- 48")  
Kennedy Kenseal (4"-12")  
M&H Style 4067 (4"-12")  
Mueller Series A-2360-20 (4"-12")  
U.S. Pipe V&H – USP-0-20 (4"-12")

Sizes 4" - 12" (AWWA C-515)  
American Flow Control 2500 series (4"-12")  
Clow 2638 series (4"-12")  
Kennedy KS-RW series (4"-12")  
M&H 7000 series (4"-12")  
Mueller A-2361 series (4"-12")  
U.S. Pipe – A USP1 series (4"-12")

Sizes 14" - 36" (AWWA C-515-02)  
American Flow Control Series 2500  
Clow Series F-6100  
Kennedy Kenseal  
M&H Style 7571  
Mueller Series A-2361-20  
U.S. Pipe V&H – USP-1-20 (14"-48")

Sizes 24" and Above  
Pre-approval required

Note:

1. Gearing required above 16"
2. 3"-36" Non-Rising Stem
3. 3"-16" OS&Y
4. Brass Test Plug
5. All valves are required to use 304 or 316 stainless bolts and nuts. The County may require 316 stainless fasteners to be used in lieu of 304 stainless in instances where it deems necessary.
6. All Valves Should be Clockwise to Close/  
Counter-Clockwise to Open

**8) BUTTERFLY VALVES (24" & LARGER)  
(Valve Shafts-Horizontal)**

Submit shop drawings

## WATER MAIN CONSTRUCTION

### 9) VALVE, COMBINATION AIR/VACUUM RELEASE

Duo Matic/Kenetic\*

1" on Mains thru 12"

Apco (Valve & Primer) 143-C 142

Valmatic 201-C 101

Cla-Val Series 36

A.R.I. D-040

2" on Mains 14"-20" (Where Specified)

Apco 145-C 144

Valmatic 202-C 102

Cla-Val Series 36

A.R.I.

\*Kenetic-Harford County Model

### 10) TAPPING SLEEVE ONLY (MECH. JOINT)

U.S. Pipe

M&H Valve 6" – 12"

Mueller 4"-12" H-619(A.C.)

Mueller 4"-24" H-615 (C.I., D.I.)

Tyler Pipe 4"-12" S-149 (for C.I.),

S-349 (for A.C.) 4" – 12"

American Flow Control M.J. Sleeve -

D.I. 4"-36"

**Full Circle Stainless Steel Tapping  
Saddles**

14" and Greater For A/C Pipe (Pre-app. required)

JCM-414

Romac-FT425

Note:

1. 304 or 316 S.S. nuts and bolts
2. Coating – Epoxy (fusion), E-coat

### 11) FITTINGS-MECHANICAL JOINT- CEMENT LINED OR EPOXY COATED - D.I. 3"-48" (Flanged for Interior Use)

Star 3" – 48"

Tyler Fdy – 36"

Tyler Fdy./Union Fdy (C.I. upon request) – 3"- 48"

Clow – 4" – 30"

HarCo-PVC - Slip Joint with restraints

Union Fdy. (C.I. upon request)

Sigma 3" – 48"

Note:

1. 48" Class 350 D.I (AWWA C-53)
2. M.J. Fittings to be Cement Lined
3. Flanged Fittings to be Epoxy Coated where available
4. Flanged fittings to have 304 or 316 S.S. bolts w/brass nuts.

### 12) RETAINER GLAND DUCTILE IRON -WEDGED (For D.I.P. Only)

EBA Iron Mega-A-Lug

Uni-Flange/Ford Wedge Action-Series 1400

Mueller Company-Aqua Grip (4"-12")

(Fire Hydrant and Valve Only)

Star Grip – 3000 series

Sigma – SLD – one lock

Tuf-Grip-Tyler-Union Foundry

Note: epoxy, nylon, mega-bond, e-coat, star bond.

### 13) PIPE COUPLING - FOR D.I.P., C-900, AC

\*Ford - Style FC 2"-24"

\*Smith-Blair - Style 441 2"-16"

\*Romac - Style 501

\*Hymax – 2000 2" – 16"

**Hymax Grip / All Models**

**Mueller Maxi-Fit**

**Romac Alpha / All Models**

\*Submit shop drawing for A.C above 10" for approval

Note:

1. All couplings to be coated w/epoxy, nylon, e-coat.
2. 304 or 316 S.S. nuts and bolts

### 14) VALVE BOX SCREW-TYPE 2-PIECE

**36"- 48" (5-1/4")**

**(3" Valves & Larger & Blow-off)**

Bingham & Taylor #4905

Capital Foundry of Virginia, Inc. #564s

East Jordan #664-S

### 15) CURB-BOX LOCKING SCREW-

**TYPE (4-1/4")**

Bingham & Taylor #4903

Capital Foundry of Virginia, Inc. #NH-138-H-UP

### 16) METER VAULT (18", 24", 30")

**(Pre-Cast Concrete)- Plastic Enclosures Only**

Mayer Brothers, Inc.

**Brands Comparable to Mid-States, Bingham &  
Taylor, Oldcastle, etc.**

**Note: No Bricks or Concrete Risers; Plastic  
Risers Only**

## WATER MAIN CONSTRUCTION

### 17) 18" METER FRAME & 12" or 15" COVER

A.Y. McDonald  
Frame # 74MACF18  
Single Hole Lid # 74MCL115T  
Double Hole Lid # 74MCL115TT  
Bingham & Taylor  
Frame # CULF18018SP  
Single Hole Lid # IFL90301WS  
Double Hole Lid # IFL90322TRF  
Capital Foundry of Virginia, Inc.  
Frame # MBX-3437-F  
Single Hole Lid # MBX-347-C-H  
Double Hole Lid # MBX-3437-C-2H  
Ford Meter Box Company  
Frame # FA32C  
Single Hole Lid # C3L-T  
Double Hole Lid # C3L-TT  
Vestal 32-482

### 18) EXTENSION RING

	<u>18"x24"</u>
Ford	Ext 1
Vestal	32-04332-ER1824
A.Y. McDonald	74MX1
	<u>18"x30"</u>
Ford	Ext 3
Vestal	32-047ER1830
A.Y. McDonald	74MX1

### 19) VALVE/METER VAULT, PRE-CAST CONCRETE, LARGE

Mayer Brothers, Inc.  
Terre-Hill  
Atlantic Precast  
A.C. Miller/Fabcrete Pre- Piped Vault  
**Home Concrete**  
**Gillespie**

Note: Vault manufacturers not NPCA certified may be permitted to supply vaults if other requirements can be met. Contact the Division of Water and Sewer Maintenance Section for details.

### 20) 4" FRAMES & COVERS FOR VALVE VAULTS and AIR-RELEASE MANHOLES

East Jordan Iron Works  
E.A. Quirin Foundry  
Neenah Foundry

24" Frame-1565-2001  
Lid No-1565-5134

30" Frame-1568-2000  
Lid No. 1568-5001

### 21) ALUMINUM METER VAULT DOORS (H-20 Loading)

BilCo  
Syracuse Castings  
Just-Set P.A. Insert (Har. Co. Spec.)

### 22) PRE-CAST VAULT TO PIPE LINE CONNECTOR

Atlantic Pre-Cast – A-Lock (<18° grade)  
Z-Lock (<18° grade)  
Terre-Hill Concrete Products – Dual Seal II  
RX101 Water Stop  
Hail Mary Rubber Company – Star Seal

### 23) JOINT PROTECTOR (Steel End Ring Concrete Pipe)

Flex-Protex Pipe Ring Protectors  
MarMac Mfg. Company

### 24) SERVICE SADDLE

Ford Style FC-202  
Romac 202N  
Smith-Blair 317 Nylon-Coated  
Mueller DN2S or DE2S  
JCM – 406  
Power Seal-3417

- Specify type of pipe when ordering.
- All saddles to be epoxy, nylon, or high density fusion plastic, E-Coat.
- Pre-sized for PVC pipe.

### 25) INSIDE METER SETTING

~~Note: Plumbing Department Use Only~~

**No Inside Meter Setters on Residential Applications**

~~5/8" Meter #1 Handyhorn:  
Ford #HH1-34G  
McDonald 742-1----TT33  
Mueller 200-1412 (State Size)~~

~~3/4" Meter Kornerhorn:  
Ford 02A-95277 w/2 ea. PJA4-44G McDonald  
741-3----PP55  
w/2 ea. 74754 T (1" x 1-1/4")  
Mueller 330-H1442----02 (State Size)~~

~~Sweat Joint  
5/8" McDonald-743-1----SS33  
3/4" N/A  
5/8" Ford - #1 Copper Horn  
3/4" N/A~~



## WATER MAIN CONSTRUCTION

### 26) CORPORATION STOP, COMPRESSION JOINT

3/4"-2"

Ford ~~FB-1000 Gripper Joint~~ Compression Q Fitting

Mueller ~~B-25008-110~~ Compression Q Fitting

McDonald ~~74701Q~~ Compression Q Fitting

### 27) CURBSTOP, THREADED

3/4"-2"

Ford ~~B-11 Series~~ Compression Q Fitting

Mueller ~~B-20283~~ Compression Q Fitting

McDonald ~~76101~~ Compression Q Fitting

### 28) CURBSTOP, COMPRESSION JOINT

Ford ~~B-44 Series Gripper Joint~~ Compression Q Fitting

Mueller ~~B-25209N-110~~ Compression Q Fitting

McDonald ~~76100Q~~ Compression Q Fitting

### 29) COUPLING, COPPER COMPRESSION JOINT

Ford ~~C-44 Series Gripper Joint~~ Compression Q Fitting

Mueller ~~H-15403N-110~~ Compression Q Fitting

McDonald ~~74758Q~~ Compression Q Fitting

### 30) Y-BRANCH COUPLING, COMPRESSION

Ford: 1" x 3/4" x 3/4" Y-44-243G ~~Gripper Joint-~~  
Compression Q Fitting, 1½" x 1" x 1" Y-44-264G  
Compression Q Fitting

\*Mueller: ~~H-15343N~~ 110 Compression Q Fitting

\*A.Y. McDonald: ~~7087SQ~~ Compression Q Fitting

\*Specify Size

### 31) CATHODIC PROTECTIVE CAP NUT (Oversized)

Protector Cap

Trumbull Industries

Mars Co.

### 32) DISMANTLING JOINT

Smith-Blair Series 975

Romac DJ-400

Uni-Flange

Note:

1. W/S.S. tie-rods and nuts, w/epoxy, nylon, or e-coat coating.
2. 304 or 316 S.S. bolt w/brass nuts.

### 33) FLANGE PIPE/ADAPTOR

Flanged end spool piece to be used, Minimum working pressure 200 psi

Hymax

EBAA-2100 Series

Uni-Flange

Note:

1. Pre-approved only.
2. Epoxy, nylon, e-coat coating.
3. 304 or 316 S.S. bolt w/brass nuts.

**WATER MAIN CONSTRUCTION**

**34) INLET YOKE ANGLE VALVE: Note 1**

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	AV94-313WG	AV94-324WG	AV91-444W w/C84-46G
Mueller	*H-14273N	*H-14278N w/H-15928N	B24278N W/H15428N
A.Y. McDonald	74602YQ	74604Y w/4753Q	74644BY w/4753Q

\*Specify size of service.

**35) METER YOKE ASSEMBLY: Note 1**

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	<del>Y501</del>	<del>Y503</del>	<del>Y504</del>
Mueller	H-5010	H-5030	H-5040
A.Y. McDonald	14-1	14-3	14-4

\*Epoxy, E-Coat, etc.

**36) OUTLET YOKE DUAL CARTRIDGE CHECK VALVE: Note 1**

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	HHCA94-313	HHCA91-323 w/C84-34G	HHCA91-444 w/C84-46G
Mueller	*H-14466-A	*H-14464-A w/H-15428	*H-14464-A w/H-15428
A.Y. McDonald	712-3YT23	*712-3YE33 w/4753Q	*712-3YE44 w/4753Q

\*Specify size of service.

**37) EXPANSION CONNECTION: Note 1**

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	EC-1	EC-23	EC-4
Mueller	---	---	---
A.Y. McDonald	714-1E	714-2E	714-4E

**38) YOKE GASKETS: Note 1**

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	<del>GT112</del>	<del>GT118</del>	<del>GT123</del>
Mueller	500844	500845	311335
A.Y. McDonald	14-1G	14-2G	14-4G

**39) YOKE NUTS: Note 1**

	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
Ford	<del>YLN-1</del>	<del>YLN-23</del>	<del>YLN-4</del>
Mueller	509326	509316	526268
A.Y. McDonald	14-1N	14-2N	14-4N

**Note: 1 Items 34 thru 39: METER SETTERS ONLY, No Cast Iron Yoke Style Setters, No Expansion Style Connections, Ford 'Coppersetter 70 & 80 Series & Resetter 40 Series' styles only (or Mueller Equivalent) with Lockable Angle Ball Valve Inlet and Angle Cartridge Dual Check Outlet, CTS Compression 'Q Fittings' . Appropriate height should be based on bury depth of service line, sizes should be based on size of meter and requirements of service customer, Submit Shop Drawings for Approval**

**40) THREADED BRASS FITTINGS**

All Manufacturers

**WATER MAIN CONSTRUCTION**

**41) BALL VALVE BRASS**

	<u>3/4"</u>	<u>1"</u>	<u>1 1/2"</u>	<u>2"</u>
Ford	B-11-333	B-11-444	B-11-666	B-11-777
Mueller	20283+Size	20283+Size	20283+Size	20283+Size
A.Y. McDonald	76101+Size	76101+Size	76101+Size	76101+Size

**42) LOCK-WING BALL VALVE BRASS**

	<u>3/4"</u>	<u>1"</u>	<u>1 1/2"</u>	<u>2"</u>
Ford	B-11-333-W	B-11-444-W	B-11-666-W	B-11-777-W
Mueller	20200-W+Size	20200-W+Size	20200-W+Size	20200-W+Size
A.Y. McDonald	76101WW+Size	76101WW+Size	76101WW+Size	76101WW+Size

**43) DUST CAP**

Niagara

**44) BRASS PIPE – THREADED**

All Manufacturers

**45) OUTSIDE DOMESTIC WATER SERVICE COMPLETE (3/4")**

See Standard Detail for material needed

**46) OUTSIDE DOMESTIC WATER SERVICE COMPLETE (1")**

See Standard Detail for material needed.

**47) WATER METERS**

<u>5/8"</u>	<del>(As per Yearly Bid)</del> <del>Badger Model 25</del> <del>Hersey Products Model 430</del> <del>Sensus iPerl</del>	<u>3"</u>	<del>[Application Varies]</del> <del>Hersey Products, Inc.</del> <del>(MVR Model 350)</del> <del>Elster Amco EVOQ4</del>
<u>3/4"</u>	<del>(As per Yearly Bid)</del> <del>Badger Model 35</del> <del>Hersey Products Model 442</del> <del>Sensus iPerl</del>	<u>4"-6"</u>	<del>[Application Varies]</del> <del>Hersey Products, Inc.</del> <del>(MVR 650, MVR 1200)</del> <del>Elster Amco EVOQ4</del>
<u>1"</u>	<del>(As per Yearly Bid) - [Application Varies]</del> <del>Badger Model 70</del> <del>Hersey Products Model MVR-50</del> <del>Sensus iPerl</del>	<u>6"-12"</u>	<del>[Application Varies]</del> <del>Elster Amco EVOQ4</del>
<u>1-1/2"</u>	<del>(As per Yearly Bid) - [Application Varies]</del> <del>Badger Model 120</del> <del>Hersey Products MVR-100</del> <del>Elster Amco EVOQ4</del>		
<u>2"</u>	<del>[Application Varies]</del> <del>Hersey Products, Inc.</del> <del>(MVR Model 160)</del> <del>Elster Amco EVOQ4</del>		

3/4" - 1": Neptune Mach 10 E-Coder R900i Meter

1.5" - 12": Master Meter Octave Meters with Neptune R900i Box

Submit Shop Drawings for any exceptions

## WATER MAIN CONSTRUCTION

### **48) WATER METERS FOR FIRE FLOW**

~~5/8" - N/A~~

~~3/4" - Hersey Meter Co. - FSMVR-30, Sensus iPerl 1"~~

~~- Hersey Meter Co. - FSMVR-50, Sensus iPerl~~

3/4", 1": Neptune Mach 10 E-Coder R900i

~~1 1/2" - Hersey Meter Co. - FSMVR-100, Elster EVOQ4~~

~~2" - Hersey Meter Co. - FSMVR-160, Elster EVOQ4~~

~~3" - 12" Elster Amco EVOQ4~~

1.5" - 12": Master Meter Octave Meters with Neptune R900i Box

Submit Shop Drawings

### **49) BACKFLOW PREVENTERS**

Apollo Valves/Conbraco Industries, Inc.

Apollo Model DCLF4A 1/2" - 12"

Apollo Model RPLF4A 3/4" - 12"

Apollo Model DCDALF4A 2 1/2" - 12"

Apollo Model RPDALF4A 2 1/2" - 12"

Watkins 1/2" - 12"

Zurn 1/2" - 12"

Note:

1. Retest and certification required before operational approval.
2. All reduced pressure models require air gap funnel drain.

### **50) AUTOMATIC FLUSHING & MONITORING SYSTEMS**

1. Mueller Hydro-Guard or Equivalent

## II. SEWER MAIN CONSTRUCTION

### 1) PIPE, POLYVINYL CHLORIDE (PVCSP)

North American Pipe  
J.M. Eagle  
National Pipe & Plastic  
Diamond

Note:

4" thru 6" Class SDR-26 Heavy Wall  
8" thru 15" Class SDR-35  
18" thru 24" PS115 ASTM F679 and F1336

### 2) PIPE, DUCTILE IRON - Not Permitted in the City of Aberdeen

<u>Slip Joint</u>	<u>Restrained Joint</u>
U.S. Pipe & Fdy.	T.R. Flex
Griffin	Snap Lock
American	Flex Ring
McWane	N/A
Atlantic States	N/A Super
Clow	Lock

#### Special Thickness Class

Note:

3" thru 6"	Class 52 min
8" thru 12"	Class 52 min
14" & above	Class 52 min
Double Cement Lined	

### 3) FORCE MAIN SEWER PIPE

2"-3"	- Rubber Ring Slip Joint - SDR 21, Class 200 PVC
3"	- <del>D.I.P. Class 52</del> - <del>D.I.P. Sized HDPE</del> - <del>Restrained Joint PVC</del>
4"-12"	- DR 14 - C-900 PVC - <del>D.I.P. - Class 52</del> - <del>D.I.P. Sized HDPE</del> - <del>Restrained Joint PVC</del>
Over 12"	- <del>D.I.P. - Class 52</del> - <del>D.I.P. Sized HDPE</del> - <del>Restrained Joint PVC</del>

Note:

1. Refer to Water Main Materials for approved manufacturers
2. All D.I.P. is to be special thickness class.
3. Double cement Lining.
4. **DR Rating based on Pressure**

### 4) MANHOLE, PRECAST CONCRETE

Atlantic Precast  
Concrete Pipe & Products  
Terre-Hill  
Monarch Products Company, Inc.  
Hanson Products  
Advanced Drainage Structures

### 5) MANHOLE TO PIPE LINE CONNECTORS

(Grades >18% and <45%)

A-Lok - Z-Lok Products

### 6) MANHOLE TO PIPE LINE CONNECTORS

(<18%)

A-Lok - Atlantic Precast  
Dual Seal II - Terre-Hill Concrete Products  
Star-Seal (greater than 16")

### 7) BUILT IN-PLACE MANHOLE TO PIPE LINE CONNECTORS

A-Lok Field Kit - A-Lok Products  
Z-Lok Field Kit - A-Lok Products

Note: 18% grade = 10.2°  
19.5% grade = 11°

### 8) CORED MANHOLE GASKETS

A-Lok - A-Lok Products  
Link-Seal - Thunderline Corp.  
Z-Lok XP - A-Lok Products  
Kor-N-Seal - National Pollution Control Systems, Inc.  
Model S406-12APW

Note: All gaskets require two S.S. bands

### 9) PLUGS - SEWER (WING-NUT)

Cherne Industries Inc. - "Gripper"  
R.C. Graham - "Hand-Tite"  
Circle Gas Manufacturing

## SEWER MAIN CONSTRUCTION

### 10) FITTINGS

Molded 4"-8"

HarCo-PVC

Multi-Fitting-PVC

(Thru 15")

Plastic-Trend-PVC

G.P.K. Products, Inc.

Fabricated 10"& Larger

Multi-Fitting-18"-36"

Freedom-10"-36"

Nyoplast-10"-36"

B&H Inc.-10"-15"

G.P.K. Products, Inc. 10"-27"

PVC 6"-8" Wye, 45° Bend

Plastic Trends SDR-26

HarCo SDR-26

Multi-fitting – SDR-26

G.P.K. SDR-26

D.I.P. 6"-8" Wye, 45° Bend

HarCo

Hersey Products, Inc.

Note (applies to Hersey ONLY):

1. Fusion, bonded epoxy, nylon, e-coat lining.

2. < 4" – Fusion bonded epoxy.

Interior double cement lined

3. All Ductile Fittings to be lines with  
Protecto401 or Comparable Product

### 11) PLASTIC STEP

M.A. Industries, Inc.

### 12) SADDLE

Geneco Sealtite (Specify type pipe)

Romac "CB" (Any type pipe)

Note: To be epoxy, nylon, or E-coated.

### 13) MANHOLE FRAME & COVER

Capitol Foundry of Virginia, Inc.

Frame & Cover No. #VB-9\*S

East Jordan Iron Works, Inc.

Frame Model No. 1565Z

Lid Model No. 1565A

Neenah Foundry Company

Frame Model No. 1976-0001

Lid Model No. 1976-0032

### 14) MANHOLE FRAME & COVER (STANDARD)

Capital Foundry of Virginia

Item No. MH-1676 HAR-SS-STR

Neenah Foundry Company

Frame Model No. 1565-2300

Lid Model No. 1565-5120

East Jordan Iron Works, Inc.

Frame Model No. 1545Z3

Cover Model No. 1544A

### 15) MANHOLE FRAME AND COVER (WATERTIGHT)

East Jordan Iron Works, Inc.

Frame Model No. 2060ZVHPT

Cover Model No. 2065AVHPT

Neenah Foundry Company

Model No. 0785-015

### 16) BRICK - SM GRADE

Redland Brick

Glen-Geary Brick Co.

Pine Hall Brick

Lawrenceville Brick

McAvoy Cobset Brick

### 17) GRADE RINGS (6" MAXIMUM HEIGHT) W/STEEL REINFORCEMENT

Atlantic Pre-Cast

Terra-Hill Products

Cretex Pro-Rings

### 18) MANHOLE PAINT FOR FRAME & COVER (OFF-SITE)

Day-Glo

(Florescent Green Industrial Enamel)

DG215-18 (Signal Green)

### 19) MANHOLE PAINT FOR FRAME & COVER (OFF-SITE)

(White Primer)

Coronado-Grip & Seal – 116-11 White

### 20) ADAPTOR (FROM 6" HOUSE CONNECTION TO CAST-IRON SOIL PIPE)

Fernco

Calder

IND Seal

Fernco Sheerguard

GPK Products/Indiana Seal

## SEWER MAIN CONSTRUCTION

### **21) PVC RISER PIPE – CLEANOUT (SDR-26 - HEAVY WALL SEWER)**

J.M. Eagle  
National Pipe & Plastic  
Diamond  
North American Pipe

### **22) SOIL PIPE (CAST-IRON HEAVY DUTY)** (Cleanout Riser 4")

Tyler  
Charlotte

### **23) RETAINER GLAND-WEDGED (FOR D.I.P.)**

Ebba Iron Meg-A-Lug  
Uni-Flange/Ford Wedge Action Series 1400  
Star Grip – 3000 Series  
Sigma  
Tuf-Grip-Tyler-Union Foundry

Note:  
Coating - Epoxy, nylon, Mega-Bond, e-coat, star bond.

### **24) AIR & VACUUM VALVES**

Apco  
Val-Matic  
Cla-Val  
A.R.I. D-020, D-025

Note: As per shop drawing.

### **25) MASTIC ROPE SEAL (3/4")**

K.T. Snyder – “Rubber-Nek”  
Press Seal Gasket Corporation  
Conseal

### **26) CLEANOUT - HUB & CAP** (Penella Style 4" & 6")

Penella Industries - PVC w/Magnet  
Jumbo Manufacturing Company -  
Cast Iron w/Gasket  
Circle Gas Manufacturing Company -  
Cast Iron w/Gas  
K.T. Snyder - “Rubber-Nek”

### **27) STAINLESS STEEL MANHOLE INSERT W/RELIEF VALVE**

Southwestern Packing & Seal Company  
- S.S. Rainstopper  
Parson Environmental Products, Inc.  
- Stainless Steel Manhole Insert

### **28) MANHOLE INSERT W/ODOR CONTROL**

Calgon “Sweet Street”  
Parson Environmental Products, Inc.

### **29) MANHOLE EXTERIOR JOINT WRAP – 12”**

Conseal – Con-Wrap CS-212  
Press-Seal-EZ-Wrap  
**Cretex External X85 Seal**

### **III. WATER AND SEWER MAIN CONSTRUCTION**

#### **1) STEEL CASING PIPE**

Approved after shop drawing submittal.

#### **2) LINER PLATE**

Approved after shop drawing submittal.

#### **3) DETECTOR TAPE **(3" Non-Metallic)****

Lineguard  
Allen Systems  
Linetec  
Empire Level

#### **4) TRACER WIRE **(7 Strand No. 8 w/.045 PE Wall Blue)****

All Manufacturers

#### **5) SOLDERLESS SPLIT BOTTOM CONNECTORS**

Brass

#### **6) SPLICING TAPE-UNDERGROUND**

3M

#### **7) BITUMINOUS COATING **(Military Spec. C-18480)****

All Manufacturers

#### **8) COAL TAR EPOXY **(16 Mil D.F.T. Min)****

All Manufacturers

#### **9) NON-SHRINK EPOXY GROUT**

All Manufacturers

#### **10) CATHODIC PROTECTIVE CAP NUTS **(Oversized)****

Protector Cap  
Trumbull Industries  
Mars Co.

#### **11) REPAIR CLAMPS**

##### 4" - 15" Two-Section

Smith-Blair 262  
Ford Style FS2  
Romac Style SS2 Powerseal  
Style 3122 AS  
Hymax – Easy Max  
**FS1 Style Full Circle**

##### 16" and above Three-Section

Ford Style FS3  
Smith-Blair Style 263 Romac  
Style SS3 Powerseal Style  
3123 AS  
**FS1 Style Full Circle**

#### **12) 2-1/2" TRACER TEST BOX W/TERMINAL BLOCK**

Bingham & Taylor – P-200 Test  
**Copperhead/Snakepit**

Note:

1. Blue lid for water. Green lid for sewer
2. Test location at fire hydrant

#### **13) 5" TERMINAL BOARD (THREE TERMINALS)**

##### W/STANDARD 4-1/4" LOCKING CURB-BOX

Bingham & Taylor –

Note:

1. Blue lid for water. Green lid for sewer

#### **14) INTERIOR MANHOLE COATING**

Sentry Polymers, Inc.  
Epoxy Vinyl Ester (Semstone 5301)

#### **15) PIPE SUPPORT/SPACER FOR SLEEVE PIPELINE**

Products, Inc.  
J-Four-M33-s.s.  
Raci-casing spacer  
CCI Pipeline System C558

#### **16) SLEEVE/CARRIER PIPE END SEAL**

CCI Pipeline Systems  
Model ESC  
Model ESW



## **WATER AND SEWER MAIN CONSTRUCTION**

NOTE:

\*The classes or designations of pipe shown on this list are the classes that are normally used in water and sewer construction in Harford County.

However, it is possible that the Contract Documents, Special Provisions and/or Plans may specify a class or designation that is different and/or greater than that shown on the list. In the event of such a discrepancy, then the Contract Documents, Special Provisions and/or Plans shall govern.

\*\*The Packer Head pipe procedure will not be used.

## LOW PRESSURE SEWER CONSTRUCTION

### IV. LOW PRESSURE SEWER CONSTRUCTION

#### 1) PIPE HDPE

1 ½" – 4" SDR-11 IPS EHMW PE3408  
Performance Pipe Prod-Driscoplex 4300  
Poly Pipe  
Flying W  
J.M. Eagle  
Charter Plastic

#### 2) PIPE-HDPE FITTING/TRANSITION PIECES - BUTT FUSION TYPE (Pressure Rated to Match System Piping)

<u>Molded 1 ½" - 4"</u>	<u>D.I.P.</u>	<u>Brass 1 ½" – 4"</u>
IPEX	HarCo	All Manuf.
Central Plastic		
Charter Plastic		
TEGG		
Agru		
Independent		

#### 3) PIPE-PVC PIPE GASKETED - (SDR-21- 1 ½"- 4")

<u>PVC</u>	<u>D.I.P.</u>	<u>Brass 1 ½" – 4"</u>
National	HarCo	All Manuf.
Charlotte		
Crestline		
J.M. Eagle		
Diamond		
North American Pipe		

Note:

1. PVC pipe fittings for main line – match pipe material.

#### 4) BALL VALVE CURB STOP - W/FEMALE IPT END CONNECTION (OR PACK JOINT)

	<u>Manufacturer</u>	<u>Female IPT End</u>	<u>Pack Joint</u>
1 ½"	Ford	B11-666	B77-666
	Mueller	B-20283+Size	V-25226
	McDonald	6101	6100-44
2"	Ford	B11-777	B77-777
	Mueller	B-20283+Size	V-25226
	McDonald	6101	6100-44

#### 5) SEWAGE GRINDER PUMPING UNIT AND CONTROL PANEL

Environment/One Corporation

#### 6) VALVE KEY EXTENSION

Genco

## LOW PRESSURE SEWER CONSTRUCTION

### 7) FITTINGS FOR LP 2-5-

<u>D.I.P</u>	<u>Brass Ball Valve</u>	<u>Brass</u>
HarCo Hersey	Ford Mueller A.Y. McDonald	All Manufacturers

Note:  
D.I.P Fittings – Cement Lined

### 8) ROADWAY BOXES – VALVE - 5 1/4" (SCRW TYPE)

Bingham & Taylor 4905  
Capital Foundry of Virginia, Inc. #564s  
East Jordan 664-S

### 9) FIRE HOSE COUPLING W/ CAP - 2 1/2"-BRASS NST THREAD

Potter-Roemer  
Red Head/Dixon  
Thompson Industrial

### 10) NIPPLE/RISER - D.I.P/BRASS 2"- 4" NPT THREAD

HarCo – D.I.P  
Brass – All Manufacturers

### 11) CONCRETE VAULT - 24"

Mayer Brother, Inc.

### 12) TRACER WIRE

(7 Strand No. 8 w/.045 PE Wall Blue)

All Manufacturers

### 13) FRAME AND COVER - 24" - 24" X 4" – STANDARD SEWER

East Jordan  
Campbell Fdy.  
Neenah – Frame – NF-15652001  
Lid-NF-15655134

### 14) R/S GATE VALVE – 3" AND GREATER

\*See water main construction for approved manufacturers.

### 15) ADJUSTMENT RING – 24"

East Jordan Infra-Riser