COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO DESIGN CRITERIA
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

CHANGES TO DESIGN CRITERIA – SECTION 1
Additions to text from Section 1 are shown in bold print, and deletions are shown with strike-through.

Section	Sub-Section	Location	Revision	Date
1	1.1	Pipe and Fitting Material: Edit text in first paragraph.	Potable water ~~and non-potable irrigation water~~ pipelines and fittings, except for service piping, shall be a minimum of six inches (6") in diameter, and have a minimum depth of thirty-inches (30") and a maximum depth of forty-eight inches (48") below finished grade. **Non-potable irrigation water pipelines and fittings, except for service piping, shall be a minimum of four inches (4") in diameter, and have a minimum depth of thirty-inches (30") and a maximum depth of forty-eight inches (48") below finished grade.** All potable water or non-potable irrigation water pipelines ~~between six and fourteen inches (6"-14") in diameter~~ shall be constructed of **ductile iron, HDPE, or** PVC ~~or HDPE~~ pipe, and shall utilize pipe meeting the requirements of the Technical Specifications. ~~Water pipelines between sixteen inches and twenty-four inches (16"-24") in diameter may be constructed of ductile iron, HDPE, or PVC pipe. Water pipelines larger than twenty-four inches (24") in diameter shall be constructed of ductile iron pipe.~~ **HDPE shall not be used for pipelines with service connections. Pipelines up to thirty inches (30") in diameter may be constructed of Fusible PVC.**	11/18/08
1	1.1	Pipe and Fitting Material: Edit text in fifth paragraph.	All buried water pipelines and mains, except those installed by horizontal directional drilling or jack-and-bore methods, shall be marked using ~~plastic locator~~ **metalized warning** tape ~~impregnated with metallic filings~~ for HDPE and PVC pipe and non-magnetic for ductile iron pipe. The locator tape shall be placed in the pipe trench two feet (2') below grade or one-half the pipe's bury, whichever is less, and labeled "potable water" or "non-potable water" as applicable. Horizontal directional drilling shall include installation of locating tone wire as described in the Technical Specifications.	05/19/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO DESIGN CRITERIA
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

Section	Sub-Section	Location	Revision	Date
1	1.4	Fire Service Systems: Edit text.	All private fire service systems for sprinkler systems, wet standpipe systems and privately-owned or controlled distribution systems shall be metered **with a Fire Service, line-sized, meter** and shall be installed with **an** appropriate back flow prevention device. ~~Metering requirements shall be classified by the type of development requiring fire service.~~ The ~~type of~~ meter~~ing device will be specified in the following subsections,~~ shall be sized by the Developer's Engineer and shall be purchased, owned, and maintained by the private service owner. ... Fire meter devices using a three quarter to two inch (¾" to 2") metering device shall be re-calibrated **to manufacturer's specifications every five (5) years,** ~~or~~ replaced every ten (10) years**,** ~~or~~ **and** replaced immediately upon meter failure. Fire meter devices greater than two inches (2") shall be re-calibrated to manufacturer's specifications every **five (5)** ~~ten (10)~~ years ~~or~~ **and** replaced immediately upon meter failure. The County Manager or designee will inform the owner by mail prior to the due date. Private owner(s) shall submit certification results to the County Manager or designee within sixty (60) days of the due date.	01/20/09
1	1.4.1	Fire Service Meters for Residential Systems: Edit text.	Residential projects such as, but not limited to, single family, multi-family condominiums, trailer parks, mobile home parks, etc. utilizing a master meter shall pass all fire flow through such meter. The meter shall be sized to pass the domestic coincident draft plus rated fire flow at the AWWA pressure loss specifications. ~~On dual water systems with fire and domestic flows in separate pipelines downstream of the master meter, the fire line shall have a Fire Service rated meter, approved by the County Manager or designee, with appropriate backflow protection.~~	01/20/09
1	1.4.2	Fire Service Meters for Commercial and Other Non-residential Systems: Edit text.	Commercial projects such as, but not limited to, shopping centers, malls, retail, and industrial buildings shall have a separate fire service connection to the water distribution main. ~~A Fire Service rated meter, approved by the County Manager or designee, with appropriate backflow protection shall be installed on the fire line.~~ The Fire Service meter and isolation valves shall be extended above final grade as shown in the Utilities Detail Drawings. For meter reading purposes, metering devices shall lie within a County Utility Easement (CUE) that shall be dedicated separately to the Board for the appropriate Water-Sewer District or in conjunction with the easements for any on-site utility system(s).	01/20/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO DESIGN CRITERIA
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

Section	Sub-Section	Location	Revision	Date
1	1.6.1	Service Pipelines: Edit text.	All building lots and parcels of land within a development on the opposite side of the roadway from a water main, or that do not have an accessible water main fronting the location of the proposed meter location, shall be provided with a means for water service by the developer. Accessibility to these lands shall be provided by the installation of water service conduits. Conduits shall be a minimum of four-inch (4") diameter PVC, with a minimum cover of 24 inches. Such pipelines shall extend at least five (5) feet past the edge of pavement, sidewalk, bike path or any other improvement and shall run from lot corners on one (1) side of the street to a lot corner on the opposite side and shall be capped and marked with a**n** ~~magnetic~~ **electronic** marker (see County Approved Product List, Appendix F). Service pipelines shall be polyethylene of a minimum of one-and-one-half inches (1 ½") in diameter.	05/19/09
1	1.9.2	Testing and Clearance Procedures: Flushing: Edit Text	**Full-bore** flushing shall be coordinated with COUNTY Water Distribution personnel and shall require forty eight (48) hour notice to Water Distribution prior to performance. During flushing the Contractor will be permitted to install a spool piece to close the gap as shown in the Utilities Detail Drawings. ~~Flush velocity shall be at least 2.5 feet per second, with a maximum of 4.0 feet per second.~~ Upon completion of such flushing, connection to the COUNTY's systems or portion(s) thereof shall be returned to the configuration shown in the Utilities Details Drawings. **Refer to specifications section 025400, 3.1.**	03/17/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO DESIGN CRITERIA
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

Section	Sub-Section	Location	Revision	Date
1	2.1.4	Gravity Sewer Laterals: Edit text in second paragraph.	Laterals shall be a minimum of six inches (6") in diameter. Lateral shall have a minimum depth of thirty-inches (30") and a maximum depth of forty-eight inches (48") below finished grade. In locations where a minimum depth of thirty inches (30") cannot be provided, laterals shall be ductile iron pipe unless the length of lateral is thirty feet (30') or less. In such cases the lateral shall be C900, DR 14 PVC pipe. At no time shall the depth of a lateral be less than twenty-four inches (24"). At no time shall a lateral be core bored into manholes. Upon installation, all lateral ends shall be plugged. A cleanout shall be provided at the end of each lateral prior to the end plug. Typical lateral and cleanout standards are shown in the Utilities Detail Drawings. The cleanout riser and cap shall be set twenty-four inches (24") above finished grade. All sewer lateral ends shall be provided with a**n** ~~magnetic~~ **electronic** marker (see County Approved Product List, Appendix F). ~~Magnetic~~ **Electronic** markers shall be **placed** ~~secured to top of lateral about~~ twenty-four inches (24") **below final grade at the** ~~underground, near~~ cleanout, for COUNTY inspector to see during final plumbing tie-in inspection. At no time shall the connection to the lateral be made to the cleanout riser or any part of the vertical assembly. Either a single six-inch (6") diameter or larger lateral to each property or a single six-inch (6") or larger lateral with a double wye shall be provided.	05/19/09
1	2.2.1	Pipe and Fitting Material: Edit text in first paragraph.	Force main pipelines and fittings shall be a minimum of four inches (4") in diameter. All force mains between four and fourteen inches (4"-14") in diameter shall be constructed of PVC or HDPE pipe and shall utilize pipe meeting the requirements of the Technical Specifications. Force mains ~~between~~ sixteen inches **(16")** and **larger** ~~twenty-four inches (16" - 24")~~ in diameter shall be constructed of ductile iron, HDPE, or PVC pipe. ~~Force mains larger than twenty-four inches (24") in diameter shall be constructed of ductile iron pipe.~~ **Pipelines up to thirty inches (30") in diameter may be constructed of Fusible PVC.**	11/18/08

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO DESIGN CRITERIA
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

Section	Sub-Section	Location	Revision	Date
1	2.2.1	Pipe and Fitting Material: Edit text in fourth paragraph.	Buried force mains, except those installed by directional drill or jack-and-bore methods, shall be marked using ~~plastic locator~~ **metalized warning** tape~~, impregnated with metallic filings~~ for PVC pipe and non-magnetic for ductile iron pipe. The ~~locator~~ **metalized warning** tape shall be placed in the pipe trench at two feet (2') below grade or one-half the depth of the pipe's bury, whichever is less, and labeled "wastewater force main." ~~Full range wastewater magnetic~~ **Electronic** markers (see County Approved Product List, Appendix F) shall be ~~secured onto top of~~ **placed twenty-four (24) inches below final grade, above the** force main**, at all bends or changes in alignment, valves, and** ~~no greater than~~ every two hundred fifty feet (250')~~ and at all fittings and at any change of direction~~.	05/19/09
1	2.3	Pumping Stations: Edit text in paragraphs 3, 5, 6, and 7.	Pump stations shall be designed to be readily accessible by maintenance vehicles**, including pumper trucks,** during all weather conditions. Pump stations shall be designed and located on the site to minimize adverse effects from odors, noise and lighting. **Pump stations shall be located on the site to have a minimum separation of twenty (20) feet from the edge of the County Utility Easement (C.U.E.) for the pump station to the edge of a body of water or residential structure (including appurtenances). Also see detail WW-7A for additional requirements.** The effective volume of wet wells shall be based on design average flows and a filling time not to exceed 30 minutes unless the facility is designed to provide flow equalization. The pump manufacturer's duty cycle recommendation shall be utilized in selecting the minimum cycling time. **Pump stations shall have a compacted earth berm on three sides with 3:1 slopes to divert liquid toward the road. Top of berm shall be 12" wide and 6" higher than back of curb (with curb) or edge of pavement (without curb). Minimum berm height shall be 6". See detail WW-7A for further detail.** A Master Pumping Station is ... A Master Pumping Station ~~will~~ **shall** have permanent standby power generation **and a pre-engineered biofiltration odor control system**. A Submaster Pumping Station is ... A Submaster Pumping Station ~~does not~~ **shall** have permanent standby power generation ~~**but shall have**~~ **and a pre-engineered biofiltration odor control system**.	12/16/08 03/17/09 04/21/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO DESIGN CRITERIA
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

Section	Sub-Section	Location	Revision	Date
1	2.3	Pumping Stations: Add two new paragraphs at the end.	**All pump stations equipped with a pre-engineered biofiltration odor control system shall have a standard potable water service with appropriate water meter and backflow preventer.** **Landscaping shall be installed around developer constructed collection pump stations that are intended to be conveyed to Public Utilities. Said landscaping shall be maintained by the developer, homeowners association, or land owner and shall NOT be located in a County Utilities' Easement (CUE). Landscaping shall be located on the three sides without the gate and shall be at least 75% of the height of the fence at Final Acceptance of the pump station. Landscaping shall provide a minimum of 80% opacity at maturity and have a non-intrusive root structure. If required plant material dies, it is the responsibility of the landscaping owner to replace it.**	10/21/08 04/21/09

CHANGES TO TECHNICAL SPECIFICATIONS – SECTION 2
Additions to text from Section 2 are shown in bold print, and deletions are shown with strike-through.

Section	Sub-Section	Location	Revision	Date
2	22501	Leakage Tests	3.1.A.1. Flushing a. **Full-bore** flush all mains to remove all sand and other foreign matter. ~~The velocity of the flushing water shall be at least 4 fps.~~ Flushing shall be terminated at the direction of the ENGINEER. Dispose of the flushing water without causing nuisance or property damage.	03/17/09
2	330502	HDPE Pipe and Fittings	2.1 Polyethylene Pipe and Fittings B. The diameter of DR 11 HDPE**, or Fusible PVC,** casing pipe provided for roadway crossing or other purposes shall conform to the following table:	02/17/09
2	330503	PVC Pipe and Fittings	3.1 Installation A. Install all buried PVC pipe and fittings in accordance with the manufacturer's recommendations**,** ~~and~~ approved shop drawings**,** ~~and~~ as specified in Division 1**,** and Section 330518. **For horizontal directional drilling of Fusible PVC, see Section 330502 for casing and execution requirements.**	02/17/09
2	330518	Laying and Jointing Buried Pipe	O. Identification 1. Metallized warning tape ~~(see County Approved Product List, Appendix F)~~: For DIP and PVC pipe (other than gravity sewer pipe and laterals) to be installed, 3-inch detectable marking tape, of appropriate color and appropriate warning statement, shall be placed along the entire pipe length. In all cases, marking tape shall be installed two feet (2') below grade or one-half the pipe's bury, whichever is less, during backfill operations (refer to Utilities Standards Manual Section 1 – 1.1 **and 2.2.1**). All PVC pipe, PVC fittings, and identification tape shall be color-coded per Collier County Standards. HDPE pipe installed by horizontal directional drilling will not be required to be marked with metalized warning tape. 2. Electronic Markers (see County Approved Product List, Appendix F): Install electronic markers **twenty-four (24)** ~~6~~ inches **below final grade**, above pipe, at all bends or changes in alignment and every **two hundred fifty** (250) feet along the pipe between bends.	05/19/09
2	330523.13	Horizontal Directional Drilling	2.1 General A. Refer to section 330502 for HDPE pipe material. **B. Refer to section 330503 for Fusible PVC pipe material.**	02/17/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO STANDARDS DETAILS
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

CHANGES TO UTILITIES DETAIL DRAWINGS - SECTION 3			
Section	Detail #	Revision	Date of Approval
3	NP-2	Change "3M Magnetic Marker" to "Electronic Marker"	05/19/09
3	NP-3	Delete entire detail and mark as unused in the table of contents.	05/19/09
3	NP-4	Change title to "Reclaimed, Raw, and Supplemental Water Air Release Valve Detail"	05/19/09
3	W-3	Add "Radius" to "2'-0" Minimum" from Right-of-Way or Sidewalk. Add "5'-0" Maximum" dimension between hydrant and valve.	01/20/09
3	W-8	Delete entire detail and mark as unused in the table of contents.	01/20/09
3	W-9	Add "Lock OS&Y Valve Closed" note for valve after backflow preventer. Add note 8 "A 4'x8' sign with 3" letters or bigger shall read: In Case of Fire Open Valve."	01/20/09
3	W-9A	Edit note "Reduced Pressure ~~Detector~~ Assembly (See Approved Backflow Devices, Appendix G)". Add "Lock OS&Y Valve Closed" note for valve after backflow preventer. Add note 7 "A 4'x8' sign with 3" letters or bigger shall read: In Case of Fire Open Valve."	01/20/09
3	W-10	Change detail title to "Fire System Assembly Detail". Remove note 3. Add "(See W-15)" to end of note 4.	01/20/09
3	W-10A	Delete entire detail and mark as unused in the table of contents.	01/20/09
3	W-11	Delete entire detail and mark as unused in the table of contents.	01/20/09
3	W-11A	Change detail title to "4" Through 10" Only Compact Fire System Assembly Detail with Master Meter Upstream". Edit note "~~Double Check Detector~~ **Reduced Pressure Backflow Preventer** Assembly (See Approved Backflow Devices, Appendix G)". Delete Gate Valve at property line. Delete notes 3 and 10. Edit note 5 as follows "Assembly will be owned and maintained by property owner, starting after the ~~inline gate vavle at the property line or right-of-way line~~ **master meter**."	01/20/09
3	W-12	Replace "irrigation" with "water" in note 3. Change "Magnetic Marker" to "Electronic Marker".	1/20/2009 05/19/09
3	W-13	Delete note "Bypass to be sized by design engineer with one half the meter size of the primary main. (Minimum size shall be 3")". Add "Lock Valve Closed" note to last valve in bypass line. Remove word "Compound" from Water Meter note.	01/20/09
3	W-14	Change detail title to "4" and Over Potable Water Fire and Domestic Meter Assembly Detail". Delete note "Bypass to be sized by design engineer with one half the meter size of the primary main. (Minimum size shall be 3")". Delete note "Install temporary construction meter provided by county" Change "Lock OS&Y Valve Closed" note to last valve in bypass line. Delete note 9.	01/20/09
3	W-15	Change detail title to "Fire Service Dual Meter Assembly with Over 10" Fire Main (Dual 8" Meters)". Delete notes 3 and 4.	01/20/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO STANDARDS DETAILS
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

Section	Detail #	Revision	Date of Approval
3	W-16	Delete entire detail and mark as unused in the table of contents.	01/20/09
3	WW-7A	Add "or residential structure (including appurtenances)" and "Fence shall have green slats to screen pump station from view." Correct slope shown on section A to 3:1 from 4:1.	03/17/09
3	WW-8	Change "Landscaping Optional (Landscaping to be owned and maintained by property owner)" to "Landscaping Required"; add "Right of Way" and dashed line delineating it; remove landscaping shown in ROW. Add text to note 13 "Water service only required when odor control unit installed." Remove line on detail called out as "3/4" SCH 80 Water".	10/21/08 05/19/09
3	WW-10	Change "Magnetic Midrange Marker" to "Electronic Marker" and depth from 12" to 24" on the marker.	05/19/09
3	WW-12	Change "Magnetic Midrange Marker" to "Electronic Marker" and depth from 12" to 24" on the marker.	05/19/09
3	WW-16	Change "Magnetic Midrange Marker" to "Electronic Marker" and depth from 12" to 24" on the marker.	05/19/09
3	All Water Details	Revise note "MJ 45º **or 90º** bend with MJ retainer glands (TYP)"	01/20/09
3	All Water Details	Revise note "All plantings shall be a minimum of ~~3'~~ **1.5'** from the edge of slab, and shall provide a 3' access opening."	01/20/09
3	All Water Details	Make sure include: "All components that come into contact with drinking water shall conform to NSF Standard 61."	01/20/09

COLLIER COUNTY UTILITIES STANDARDS MANUAL
TABLE OF REVISIONS TO APPENDICES
SINCE SEPTEMBER 2008 UPDATE
COLLIER COUNTY PUBLIC UTILITIES ENGINEERING DEPARTMENT
AS OF 07/31/09

CHANGES TO APPENDICES – SECTION 4				
Section	Sub-Section	Location	Revision	Date
4	Appendix G	Page 1	Remove list of specific fire rated backflow devices used for dedicated fire lines and add minimum requirements.	12/16/08
4	Appendix G	Page 1	Update fire rated backflow device minimum requirements to clarify reduced pressure assemblies and line sized meters.	02/17/09
4	Appendix G	Page 1	Add list of UL or FM approved backflows and meters.	03/17/09