

Changes made since May 27, 2015 adoption of the Design Standards Manual

#	Book	Chapter	Paragraph	Figure	Exhibit	Change(s) Made	Revision Summary/Purpose	Date Changed
1	Book 2	SW12	n/a	n/a	Exhibit SW12-4 - Application for SWPPP Permit	Added DVS address at bottom; Added a "P" to SWPP throughout	Update to DVS department address and corrected a typo.	7/30/2015
2	Book 1	GR6	n/a	n/a	Exhibit GR6-1 Surveying and Inspection Notice	Added verbiage and examples to make the letter more descriptive of the type of project being proposed	Updated language in the example letter sent to property prior to starting survey work. Revision to help clarify and describe proposed work to property owners.	8/19/2015
3	Book 5	MA6 and MA7	MA6.07.2 and MA7.04.2	n/a	n/a	ASTM reference was incorrect. Changed from ASTM D4710 to ASTM D3350	Corrected an incorrect ASTM reference.	2/2/2016
4	Book 3	SA8	8.05.3	n/a	n/a	Denominator in Hazen Williams equation should be multiplied not added	Corrected a typo in the Hazen Williams equation.	3/22/2016
5	Book 4	W5	5.08.4	n/a	n/a	Denominator in Hazen Williams equation should be multiplied not added		3/22/2016
6	Book 4	W6	6.02.2	n/a	n/a	Deleted reference to copper water services. All services to be 1" HDPE	Removed all references in the manual to copper water service lines. The preferred pipe material for water services is HDPE.	3/22/2016
7	Book 5	MA7	7.02	MA7.1		Deleted reference to copper water services. All services to be 1" HDPE		3/22/2016
8	Book 5	MA7	7.07	MA7.8		Deleted reference to copper water services. All services to be 1" HDPE		3/22/2016
9	Book 5	MA5	n/a	n/a	MA5-3	Updated Proprietary SQU List to reflect changes to manufacturers and flow rates.	Updated the approved SQU list to reflect recent product changes and updates.	6/27/2016
10	Book 4	W5	W5.03.7.B	n/a	n/a	Inserted the following sentence: "Large electrical transmission line foundations shall be a minimum 10-feet (10') away from water mains."	Add language that water mains should be located 10 feet away from overhead electrical transmission main foundations.	9/26/2016
11	Book 5	MA7	MA7.02	Ma7.1		Remove both Certalok (PVC) rows from table	CertaLok and Fusible PVC watermain pipe materials were removed from the approved materials, due to installation issues.	9/26/2016
12	Book 5	MA7	MA7.02	Ma7.1		Remove Both fusible (PVC) rows from table		9/26/2016
13	Book 5	MA7		MA7.4		Remove both Certalok (PVC) rows from table		9/26/2016
14	Book 5	MA7		MA7.4		Remove Both fusible (PVC) rows from table		9/26/2016
15	Book 5	MA7	MA7.12.3	n/a	n/a	Adjust note at end to read "When water main diameter exceeds 12 inches, consult city utilities for appropriate restraint devices.	Added a note to coordinate with City Utilities for large dia watermain restraint devices.	9/26/2016
16	Book 4	W7	W7.03.6	n/a	n/a	End in a type 5 hydrant instead of type 3.	Edited requirements to end watermains with a type 5 hydrant instead of a type 3.	10/3/2016
17	Book 5	MA7	MA7.02.3	n/a	n/a	Delete "Water Maintenance and Service shall be the sole entity responsible for turning the valves that create this single point of connection to the existing system."	Edited the requirements to have Water Maintenance and Service be responsible for operating new valves that directly connect new watermains to the existing. Changed the responsibility to the contractor.	10/3/2016
18	Book 5	MA7	MA7.02.3	n/a	n/a	Delete "other" from the 8th bullet point. Sentence shall state "The Contractor is responsible for turning all valves not accepted as part of the distribution system."		10/3/2016
19	Book 5	MA7	MA7.02.3	n/a	n/a	Add bullet point "Contractor shall operate valves that connect to the existing service, under the observation of Water Maintenance and Service."		10/7/2016
20	Book 5	MA7	MA7.03.1	n/a	n/a	Delete "non-fusible."	Removed additional references to fusible PVC pipe, since the material is no longer acceptable.	10/3/2016
21	Book 5	MA7	MA7.03.2	n/a	n/a	Delete Paragraph titled Pressure PVC Pipe (fusible)		10/3/2016
22	Book 5	MA7	MA7.04	MA7.5		Add Superscript 1 to Min. Size to state "Note 1: Minimum of 2-inch HDPE pipe is acceptable in dead end applications, but required approval by City Utilities Engineering."	Added a note to allow 2" HDPE, but only in dead end watermain applications and with approval from City Utilities.	10/3/2016
23	Book 5	MA7	MA7.07.4			Move 4 to before Figure MA7.10.	Format revision.	10/3/2016
24	Book 5	MA7	MA7.07.6	n/a	n/a	Add paragraph 6. Pipe Stiffener for Services.	Added requirements to use a pipe stiffener for HDPE water services.	10/3/2016
25	Book 5	MA7	MA7.08.2	n/a	n/a	Delete C509, replace with C515.		10/3/2016
26	Book 5	MA7	MA7.08.2	n/a	n/a	Add verbiage to state "Valves shall have mechanical joints, unless HDPE fusible end valve is used."	Removed the older AWWA C509 standard for resilient seat gate valves and updated it with the more current standard of AWWA C515. Revision reflects current industry standard. And added fusible HDPE ended gate valves as allowable.	10/3/2016
27	Book 5	MA7		MA7.12		Remove the AWWA C509 Designation from the Manufacturers: Clow, Kennedy, Mueller. Add AVK (for HDPE) manufacturer, series 66 model, Min 6 inch and Max 12 inch.		10/3/2016
28	Book 5	MA7	MA7.08.3-4	n/a	n/a	Move paragraphs 3 and 4 to before Figure MA7.12.	Format revision.	10/3/2016

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29	Book 5	MA7	MA7.12.1	n/a	n/a	Revise language to state "Tracing wire is used on all water mains, regardless of material, including service lines."	Clarified requirements for tracing wire, noted that it needs to be used on all watermains and service lines.	10/3/2016
30	Book 5	MA7	MA7.12.1.A	n/a	n/a	Delete #10, replace with #12. Add two (2) types of installation of Open Cut and Trenchless. Min. break load of 1,110 lbs and 3,000 lbs, respectively.	Updated the tracing wire material requirement to a stronger wire. Changes made to guard against breaking during installation.	10/3/2016
31	Book 4	W7	W7.03.3	n/a	n/a	Add INDOT before No. 8, No. 53, and No. 73.	Added INDOT before aggregate types to clarify gradation requirements.	11/7/2016
32	Book 4	W5	W5.05.3	n/a	n/a	Add INDOT before No. 8, No. 53/73		11/8/2016
33	Book 5	MA7	MA7.02.4.B.2	n/a	n/a	Add "or slug" for the following statement to say: " Use the continuous feed or slug method of disinfecting.	Updated the chlorine disinfection requirements to allow for granular chlorine and the slug method for disinfection.	11/29/2016
34	Book 5	MA7	MA7.02.4.B.2	n/a	n/a	Add the statement "Utilize calcium hypochlorite in granular form containing 65 percent available chlorine by weight for disinfection."		11/29/2016
35	Book 2	SW11	SW11.02	n/a	n/a	Two paragraphs added at the end of the section: "New developments that are less than 2-acres require release rates less than 0.36 cfs. An orifice small enough to control a flow rate this low can be a maintenance issue. Contact Development Services to establish possible alternatives. Potential options include water quality offsets, or a minimum 3-inch diameter orifice. Storm-water quality measures will be required for sites that are less than 1-acre and need to receive a variance to release at a rate greater than those allowed by Figure SW11.1."	Two paragraphs added at the end of the section to clarify the release rate requirements for new development projects. Also language added to note that small release rates may yield smaller overflow pipes, which can create maintenance issues. Language was added to coordinate with DVS as required for small development sites.	3/6/2017
36	Book 2	SW11	SW11.03	n/a	n/a	Sentence added at the end of the introductory paragraph: ", any increase in impervious area will require additional stormwater control. This includes existing developments that may or may not have existing stormwater detention facilities."	A sentence was added onto the introductory paragraph to clarify that any increase in impervious areas will require additional stormwater control.	3/6/2017
37	Book 2	SW11	SW11.03.3	n/a	n/a	Edited the second sentence: Added in.... <i>peak discharge "leaving the site, shall not increase"</i> and deleted... <i>redevelopment project "shall not increase"</i>	Sentence was rearranged for clarity about no	3/6/2017
38	Book 2	SW11	SW11.03.5	n/a	n/a	Added in a new ¶ heading and sentence: "5. <i>Release Rate Options - When a new detention basin is required to control the increase in impervious area runoff,</i> "	New heading and introductory sentence was added to clarify release rate section.	3/6/2017
39	Book 2	SW11	SW11.03	n/a	n/a	Last paragraph edited-- " <i>Redevelopment projects with New developments that are less than 2 acres of disturbed area require...</i> "	Sentence was edited to clarify required release rates. The sentence originally only referred to development projects, but was within the redevelopment section. The same language was copied over to the new development section SW11.02.	3/6/2017
40	Book 5	MA7	n/a	MA7.4	n/a	deleted the second row which included the reference to AWWA C905. Edited the acceptable diameter ranges for the AWWA C900 pipe to allow up to 16".	The PVC tables material AWWA standards were edited since the recent change by AWWA to combined AWWA C905 with AWWA C900. AWWA C900, now covers pipe diameters from 4" to 60", where previously it only covered 4" -12".	3/9/2017
41	Book 5	MA7	MA7.12.5	n/a	n/a	Added: " <i>for PVC</i> " after paragraph heading, and in the paragraph text,	Added for PVC to section to clarify when ductile iron fittings are used for watermains.	3/9/2017
42	Book 5	MA7	MA7.12.5	MA7.13	n/a	Added: " <i>Ductile Iron ...for PVC</i> " to figure heading.		3/9/2017
43	Book 5	MA7	MA7.12.5	MA7.13	n/a	Removed: " <i>Standard Fittings</i> " and " <i>AWWA C110</i> " from table.	Deleted reference to standard fittings, the compact fittings are what are almost always supplied.	3/9/2017
44	Book 5	MA7	MA7.12.6	n/a	n/a	Added: Section " <i>6. Fittings for HDPE Pipe</i> ". And inserted a paragraph with the HDPE fitting requirements.	Section and figure added to allow HDPE fittings for HDPE pipe.	3/9/2017
45	Book 5	MA7	MA7.12.6	MA7.14	n/a	Added Figure MA7.14 to allow HDPE fittings. Figure included reference standards and sizes.		3/9/2017
46	Book 5	MA7	MA7.08.3	n/a	n/a	Deleted " <i>3-piece Buffalo screw type boxes</i> " and replaced with " <i>two piece, screw type,</i> "	Removed reference to Buffalo Style and clarified that 2 piece is the preferred, in lieu of 3 piece.	3/9/2017
47	Book 2	SW12	SW12.05.16	n/a	n/a	Sentence added at the beginning of the paragraph: " <i>Erosion control blankets are required on all slopes of 4:1 or steeper</i> "	Sentence added to clarify a minimum slope that erosion control blankets are required for.	3/6/2017

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48	Book 2	SW7	n/a	SW7.2		Changed maximum street encroachment requirements for inlet spacing. Edited the values for Tmax and d.	Revised the allowable street flow encroachment to better align with Fort Wayne traffic engineering and the National Highway association requirements for inlet spacing. Old version allowed local streets to flood to centerline, revised only allows flooding to 1/2 of the driving lane.	3/6/2017
49	Book 5	MA5	n/a	n/a	MA5-3	Added 2 new SQU - Aqua-Swirl AS-11 (10.54 cfs) and AS-13 (16.00 cfs)	Allowed 2 new Aqua swirl SQU to the approved lists. Additions based on Indy approval of the units.	3/15/2017
50	Book 5	MA5	n/a	n/a	MA5-3	Added footnote: "Poly coated steel (PCS) not approved for use in public ROW"	Added a note to not allow corrugated metal SQU unit (AquaSwirl) in the ROW. Note aligns with Indy's SQU requirements.	3/15/2017
51	Book 5	MA5	n/a	n/a	MA5-3	Deleted Footnote: "1 - Temporary Approval" Removed note from the following SQU's -- Downstream Defender, Aqua-Swirl and Vortechs.	Removed the temporary approval note from all of the SQU's to align with Indy's SQU requirements.	3/15/2017
52	Book 5	MA7	MA7.02.4.B.2	n/a	n/a	Added in a new paragraph B "Electrofusion Saddle Joint Test:" that covers pressure testing for electrofusion watermain tapping saddles.	Electrofusion joint pressure testing requirements added to help identify poor electrofusion joints prior to tapping into the watermain. The testing requirements are intended to reduce leaking joints.	3/21/2017
53	Book 5	MA7	MA7.12.C	n/a	n/a	Adding in a new paragraph C "Tracing Wire Corrosion Protection". Paragraph includes material requirements for a packaged magnesium sacrificial anode to be attached to the tracing wire to help protect it against corrosion.	New requirement to install a sacrificial anode onto tracing wire to help protect the wire from corrosion and to aid in future plastic pipe locating.	3/21/2017
54	Book 5	MA4	MA4.02.2.A	n/a	n/a	Deleted temporary from section heading "Temporary Perimeter Protection- Filter Sock"	Removed temporary from some of the erosion control products, since they can be used for permanent applications.	3/21/2017
55	Book 5	MA4	MA4.02.7	n/a	n/a	Deleted temporary from section heading "Temporary Sediment Trap"		3/21/2017
56	Book 5	MA4	MA4.02.5	n/a	n/a	Deleted temporary from section heading "Temporary Rock Check Dam"		3/21/2017
57	Book 5	MA4	MA4.02.9	n/a	n/a	Deleted temporary from section heading "Coir Logs for Temporary River/Lake Shore Protection"		3/21/2017
58	Book 5	MA4	MA4.04.7	MA4.8		Added "Min 28 day Comp Strength" to the table column heading.	Timeframe requirement for strength testing added to table heading to clarify the required strength.	3/21/2017
59	Book 5	MA4	MA4.04.7	MA4.8		Changed the max water to cement ratio for class A concrete to 0.45, and the min 28 day compressive strength from 4,500 to 4,000.	Revised the minimum water to cement ratio to align with industry standards. And revised the compressive strength to match the water to cement ratio adjustment.	3/21/2017
60	Book 5	MA4	MA4.05.7	n/a	n/a	Revised the flowable fill material requirements. Included detailed material requirements in lieu of only referencing INDOT standards.	Edited the flowable fill material requirements to coordinate with local suppliers products.	3/21/2017
61	Book 5	MA5	MA5.20	n/a	n/a	Added in stone fill requirements for gabions and reno mattresses. There were no fill requirements listed previously. Added in INDOT requirements for Uniform A and B rip rap.	Added in gabion and reno mattress stone fill material requirements, to clarify the stone gradation requirements.	3/21/2017
62	Book 5	MA4	MA4.02.6	n/a	n/a	Added paragraph 6 HDPE Check Dams.	New product HDPE Check Dams added into the Erosion Control Section to allow for more product options.	5/1/2017
63	Book 5	MA4	MA4.02.7.G	n/a	n/a	Added paragraph G - Latex Bound Coir Mat	New product latex bound coir mats added to the temporary inlet protection section, to allow for more products for erosion control.	5/1/2017
64	Book 5	MA4	MA4.02.11	n/a	n/a	Added paragraph 11 - Trackout Plates	New product included to allow the use of track out plates to assist with site erosion control.	5/1/2017
65	Book 5	MA4	MA4.02.12	n/a	n/a	Added paragraph 12 - Turf Reinforcement Mats	New product for plastic mats that can be placed on surfaces to avoid rutting and erosion.	5/1/2017
66	Book 5	MA4	MA4.02.12	n/a	n/a	Added paragraph 12 - Turf Reinforcement Mats	New product for plastic mats that can be filled with stone or other materials and can be placed on surfaces to avoid rutting and erosion.	5/1/2017
67	Book 5	MA4	MA4.09	n/a	n/a	Added paragraph 7 - Hydraulic Growth Medium	New product that is a type of fertilizer called biotic earth black. That when placed in seed mixtures allows the plantings to grow quickly and evenly.	5/1/2017

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68	Book 5	MA5	MA5.11.1.B	n/a	n/a	Inserted the following: "Note - Projects that are located in dense urban areas, or near sensitive building foundations and structures must require that rubber gasket boots are utilized for the pipe to manhole and inlet connections."	Sentence included to require that rubber boots are utilized for pipe to manhole connections in areas where manholes are in downtown, near sensitive buildings, or foundations.	5/1/2017
69	Book 5	MA5	MA5.12	n/a	n/a	Inserted the following: "Connections between the inlet and pipe must be soil tight. Projects that are located in downtown district or near sensitive building foundations and structures must require that rubber gasket boots are utilized for the pipe to manhole connections."	Sentence included to require that rubber boots are utilized for pipe to inlet connections in areas where inlets are in downtown, near sensitive buildings, or foundations.	5/1/2017
70	Book 5	MA5	MA5.21	n/a	n/a	Added entire section titled "Channel Protection Systems" which included geoweb, a-jacks, concrete cloth, and concrete filled fabric.	New section added which includes channel protection systems from erosion and streambank deterioration. Allows for other options besides the traditional riprap.	5/1/2017
71	Book 5	MA4	MA4.08.4	n/a	n/a	Updated the link to the permeable paving design guidance.	Link updated due to website restructuring.	7/27/2017
72	Book 5	MA5	MA5.19	n/a	n/a	Updated the link to the acceptable Fort Wayne Plant list.	Link updated due to website restructuring.	7/27/2017
73	Book 2	SW4	SW4.02	n/a	n/a	Updated the link to the Stormwater Rules and Regs.	Link updated due to website restructuring.	7/27/2017
74	Book 2	SW4	SW4.02.6	n/a	n/a	Added in a new paragraph 6: "Infiltration Practices"	Paragraph added to limit stormwater infiltration practices in wellhead protection areas. Edit aligns with MS4 Rule 13 req.	7/27/2017
75	Book 2	SW4	SW4.02.7	n/a	n/a	Added in a new paragraph 6: "Below Grade Stormwater Discharges"	Paragraph added to limit stormwater below grade discharges without appropriate treatment. Edit aligns with MS4 Rule 13 req.	7/27/2017
76	Book 2	SW4	SW4.03	n/a	n/a	Updated the link to the Floodplain Ordinance.	Link updated due to website restructuring.	7/27/2017
77	Book 2	SW6	SW6.04	n/a	n/a	Added in the following sentence: "As site conditions allow, the rate at which water flows through the storm sewer system and MS4 conveyances shall be regulated to reduce outfall scouring and stream bank erosion."	Sentence added to require designing stormwater conveyance to minimize outfall and stream bank erosion. Addition aligns with MS4 Rule 13 req.	7/27/2017
78	Book 2	SW6	SW6.04	n/a	n/a	Added in the following sentence: "As site conditions allow, a vegetated filter strip of appropriate width shall be maintained along unvegetated swales and ditches."	Sentence added to require incorporating vegetative buffer strips for swales and ditches. Addition aligns with MS4 Rule 13 req.	7/27/2017
79	Book 2	SW6	SW4.02.4	n/a	n/a	Added additional contaminants to be captured from gas and refueling stations. Contaminates include: lead, copper, zinc, and polyaromatic hydrocarbons	Contaminates added to align with MS4 Rule 13 req.	7/27/2017
80	Book 2	SW1	SW1.03	n/a	n/a	Add the following to the definitions section: <i>MS4 Conveyances Stormwater system that is within a designated MS4 area.</i>	Definition incorporated to clarify MS4 conveyances which is a term used by Rule 13 and that was added into the design chapters.	7/27/2017
81	Book 1	GR5	GR5.13	n/a	n/a	Added section GR5.13	Paragraph added to reference current PROWAG guidelines to make any work in right-of-way accessible for all pedestrians.	8/21/2017
82	Book 5	MA5	MA5.15	n/a	n/a	Added the following sentence "In pedestrian traveled areas, castings frames and covers must comply with current ADA requirements with a max opening of 1/2-inch. Utilize pick hole plugs as appropriate. "	Information added to coordinate with updated standards and to provide safe routes of travel for all pedestrians.	9/8/2017
83	Book 5	MA6	MA6.12	n/a	n/a			9/9/2017
84	Book 5	MA5	MA5.15	n/a	Exhibit MA5-1	Included the listing of approved ADA Castings		9/9/2017
85	Book 2	SW7	SW7.03.9	n/a	n/a	Added the following sentence " 8.9. In pedestrian traveled areas, install ADA compliant inlet grates."		9/10/2017