

SECTION 10 - REVISION LOG

PART 1 GENERAL

1.01. Johnson County Wastewater makes periodic revisions to these technical specifications. The history of revisions is noted in the following revision log. The Modified Date will be added to the footer on all modified sections. It is the Contractor's responsibility to monitor and comply with all revisions to the specifications.

Date	Modified By	Section No.	Paragraph No.	Description
3/29/11	KSW	2410-2	1.04.E	Deleted first "cost" in the last sentence and changed modified date to 3/29/11
3/29/11	KSW	2445.4	204.B	Deleted "are" in the first sentence and change modified date to 3/29/11
3/29/11	KSW	2530		Changed all pages to read "modified 3/29/11"
3/29/11	KSW	2530	1.04	Replaced "or" with "and"
3/29/11	KSW	2530-7 and 2530-8	2.01.G.1 thru 3	Removed extra space on Page 7 and combined Items 1 and 2, and renumbered section
3/29/11	KSW	2530-11	3.03.K	Removed extra space on Page 11 and combined Items K and L and renumbers section.
3/29/11	KSW	2534-14	2.02.G.2	Changed "supplies" to "supplied"
3/29/11	KSW	2536-7	3.03.B.2.b	Removed bookmark error and added "-19"
3/29/11	KSW	2536-9	3.03.G.2	After (30) added the words "degree, i.e. 58"
3/29/11	KSW	2920-10	3.05.G.1	Replaced "seeding" with "sodding" in the first sentence
4/18/11	KSW	2230	3.03.D.13	Deleted Section D.13 Post Blasting Survey
4/18/11	KSW	10	1.01	Add Modified Date wording
5/2/11	KSW	2530-5	201.A.12.a	Replace "2 percent of less" with "2 percent or less".
5/2/11	KSW	2536-4	3.02.A.3	Replace "(RCP)" with "(Rigid Pipe)".
5/2/11	KSW	2536-11	3.08	In the last sentence of paragraph, replace "place" with "placed"
5/2/11	KSW	2536-13	3.10.B.2.a	Insert "When" before "Gravity sewer pipe".
5/2/11	KSW	2536-17	3.12.B	Replace reference to "paragraph 3.11.A" with "paragraph 3.12.A."

Date	Modified By	Section No.	Paragraph No.	Description																		
5/2/11	KSW	2537-2	1.07.B.1	In the third sentence, replace "Contractor's" with "Installer's" and "bidding contractor" with "Installer".																		
5/2/11	KSW	2537-4	2.02.B	In the second sentence replace "flexural modulus shall be" to "flexural modulus to be".																		
5/2/11	KSW	2538-2	1.06.A	Insert "or subcontractor performing the work" after "The contractor".																		
5/2/11	KSW	2538-2	1.06.B	Replace with the following: "B. Polyethylene pipe jointing shall be performed by personnel trained in the use of butt-fusion equipment and recommended methods for new pipe connections. Personnel directly involved with installing the new pipe shall have received training by a qualified representative in the proper methods for handling and installing the polyethylene pipe."																		
5/2/11	KSW	2538-2	1.06.D	Insert "or subcontractor performing the work" after "The contractor".																		
5/2/11	KSW	2539-1	1.01.A	Insert the following items to the end of the table: <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Test</u></th> <th style="text-align: center;"><u>Technical Specification Section</u></th> </tr> </thead> <tbody> <tr> <td>Cementitious Liner Compressive Strength Testing</td> <td>Section 2532</td> </tr> <tr> <td>Epoxy Manhole Liner Holiday Testing</td> <td>Section 2532</td> </tr> <tr> <td>Flexible Epoxy Grade Adjustment and Frame Seal Holiday Testing</td> <td>Sections 2532 and 2700</td> </tr> <tr> <td>Flexible Manhole Joint Liner Holiday Testing</td> <td>Section 2700</td> </tr> <tr> <td>CIPP Liner Physical Property Testing</td> <td>Sections 2537 and 2637</td> </tr> <tr> <td>CIPP Liner Wall Thickness Test</td> <td>Sections 2537 and 2637</td> </tr> <tr> <td>Visual Internal CIPP Liner Inspection</td> <td>Sections 2537 and 2637</td> </tr> <tr> <td>PVC Resin Compounding Test</td> <td>Sections 2534 and 2538</td> </tr> </tbody> </table>	<u>Test</u>	<u>Technical Specification Section</u>	Cementitious Liner Compressive Strength Testing	Section 2532	Epoxy Manhole Liner Holiday Testing	Section 2532	Flexible Epoxy Grade Adjustment and Frame Seal Holiday Testing	Sections 2532 and 2700	Flexible Manhole Joint Liner Holiday Testing	Section 2700	CIPP Liner Physical Property Testing	Sections 2537 and 2637	CIPP Liner Wall Thickness Test	Sections 2537 and 2637	Visual Internal CIPP Liner Inspection	Sections 2537 and 2637	PVC Resin Compounding Test	Sections 2534 and 2538
<u>Test</u>	<u>Technical Specification Section</u>																					
Cementitious Liner Compressive Strength Testing	Section 2532																					
Epoxy Manhole Liner Holiday Testing	Section 2532																					
Flexible Epoxy Grade Adjustment and Frame Seal Holiday Testing	Sections 2532 and 2700																					
Flexible Manhole Joint Liner Holiday Testing	Section 2700																					
CIPP Liner Physical Property Testing	Sections 2537 and 2637																					
CIPP Liner Wall Thickness Test	Sections 2537 and 2637																					
Visual Internal CIPP Liner Inspection	Sections 2537 and 2637																					
PVC Resin Compounding Test	Sections 2534 and 2538																					
5/2/11	KSW	2920-4	2.03.B	In the table replace "140" with "325".																		
5/2/11	KSW	2920-8	3.02.G.2	Replace "Not" with "No".																		
5/2/11	KSW	2920-10	3.04.H.1	In the first sentence delete "meet with each property owner and furnish" and replace it with "provide to each property owner".																		
5/2/11	KSW	2920-11	3.06.E.	Add the following paragraph after paragraph E.2: "3. Coordinate with property owner to schedule the driveway concrete pour. Contractor shall temporarily backfill trench with AB-3 to allow vehicle traffic to access property."																		
5/2/11	KSW	2930	3.05.J.2	In the first sentence change "meet with" to "provide". Delete "and furnish" and add "with".																		
5/2/11	KSW	3000-5	2.01.B	Delete "standard concrete".																		
5/2/11	KSW	3000-5	2.02.A	Replace "Type A Concrete" with "Class A Concrete".																		

Date	Modified By	Section No.	Paragraph No.	Description
5/2/11	KSW	3000-5	2.02.B	Replace "Type B Concrete" with "Class B Concrete".
5/2/11	KSW	3000-5	2.06	Replace paragraph with the following: "Air entraining agent shall comply with ASTM C260 and be Protex "AES", Grace "Darex AEA", Sika Chemical "Sika AER 104", or approved equal."
5/2/11	KSW	1400		Replaced Section 1400 in its entirety
5/2/11	GER	2536	3.07	Delete "A."
3/23/12	KSW	2445-5	2.06.B.1	In the first sentence after "shall be" add "and gravity main applications may be"
3/23/12	KSW	2530-2	2.01.A.5	Add at the end of the sentence "for connection to sewer mains 15 inches in diameter and larger."
3/23/12	KSW	2530-10	3.03.H.1	After the second sentence added "Riser rings may be used up to a maximum of 12 inches of height. The minimum number of riser rings required to achieve the necessary adjustment shall be used."
3/23/12	KSW	2530-10	3.03.H.2	Remove "New" from the first sentence and the title. After the third sentence, add "The minimum number of riser rings required to achieve the necessary adjustment shall be used."
3/23/12	KSW	2530-10	3.03.H.3	Delete entire section and confirm that 3.03.H.4 was renumbered to 3.03.H.3
3/23/12	KSW	2534-15	2.02.H.1.b	Insert after first sentence "The minimum wall thickness for gravity HDPE service lines shall conform to DR17."
2/17/16	KSW	2920-9	3.04.H.2	Deleted the words "acceptance" and "the" with "until established and accepted by JCW."
2/18/16	KSW	Section 10-Revision Log	1.01	Replace the entire third sentence with "The Modified Date will be added to the footer on all modified sections."
2/18/16	KSW	2534-15	2.03	After second sentence added "See Section 2536 3.03.G.4 for approved saddle if allowed."
2/18/16	KSW	2536-2	2.01	Added KDOT PB-2 after the word "following". In the table for Sieve Size Gradations, added "1", deleted "1/2" and "No. 200". Under Percentage Passing added "100", "80", deleted "90-100", changed "20-55" to "30-60", changed "0-5" to "0-25", changed "0-2.5" to "0-5" and deleted "0-2.5".
2/24/16	KSW	2536-10	3.03.G.4	After first sentence added "If approved, a Multi-fittings Saddle Tee Casket Hub and Gasket Skirt with Stainless Steel Bands conforming to ASTM D3034, F170 or approved equal is to be used."
6/7/16	KSW	2530-3	2.01.A.8.a	Changed 60 percent to 50 percent
6/7/16	KSW	2530-4	2.01.A.9.a	In the second sentence after the words "recycled rubber" added "or polypropylene composite". Added a new third sentence "Polypropylene composite riser rings shall be Cretex Pro-Rings or approved equal." In the fifth sentence after "rubber" added "or polypropylene composite". In the sixth sentence after "thickness of" deleted the words "a rubber" and added "the".

Date	Modified By	Section No.	Paragraph No.	Description
6/7/16	KSW	2530-4	2.01.A.9.b	In the first sentence after the words "recycled rubber" added a comma and the words "polypropylene composite"
6/7/16	KSW	2530-5	2.01.A.12.a	Replaced "0.035" with 0.030"
6/7/16	KSW	2530-5	2.01.D.1	Replaced the word "repair" with "filling"
6/7/16	KSW	2530-7	2.01.G.1	Removed unnecessary section break after the words "coated per" and subsections were automatically renumbered
6/7/16	KSW	2530-11	3.03.K	Removed unnecessary section break after the words "accordance with" and subsections were automatically renumbered
6/7/16	KSW	2536-11	3.07	Add the following paragraph after 3.06: "3.07. Separation from Storm Sewers - Provide reinforced concrete encasement of the sanitary sewer when the sanitary sewer main or sanitary service stub crosses a storm sewer within 30 inches. Extend encasement in both directions from the crossing a distance equal to the difference in elevation between the top of the storm sewer and the flow line of the sanitary sewer for a total distance of two times the elevation difference, but in no case less than 10 feet long." Updated the <u>paragraph numbers to reflect the addition</u>
6/13/16	KSW	1400-1	1.01B	At the end of this paragraph after the words "point repair" added "or CIPP".
6/13/16	KSW	1400-3	Part 3, 3.01	Replaced Paragraph 3.01 in its entirety
6/13/16	KSW	1400	Part 3, 3.03 and 3.04	Replaced Paragraphs 3.03 and 3.04 in their entirety
6/13/16	KSW	1400	Part 3, 3.05	Deleted Paragraph 3.05 in its entirety
6/13/16	KSW	2537	Part 1; 1.04D	Added the following after first sentence "The Contractor shall also submit the Project Surface Video Recording, as specified in Section 1310.
6/13/16	KSW	2537	Part 1, 1.04E	Added a new Paragraph E as follows: The Contractor shall submit the pipe diameter, length, and CIPP wall thickness for the sewer to be lined. A certificate sealed by an insured registered Professional Engineer in the State of Kansas shall be submitted stating the design meets the performance and requirements of this specification.
6/13/16	KSW	2537	Part 1, 1.07B.3	After the last sentence added the following: "The tube and resin manufacturing and process shall operate under a quality management system which is third party certified to ISO 9001."
6/13/16	KSW	2537	Part 1, 1.07C	Deleted Paragraph 1.07C in its entirety.
6/13/16	KSW	2537-4	2.02A	After the last sentence added the following: "Under no circumstances shall the CIPP liner be less than 6 mm."
6/13/16	KSW	2537-5	2.02D	Replaced table in its entirety.

Date	Modified By	Section No.	Paragraph No.	Description
6/13/16	KSW	2537-5	2.02E	Replaced Paragraph 2.02E with the following: "The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in paragraph 2.02.D above and in accordance with the most conservative results from the design equations in ASTM F1216 Appendix X1, and never less than 6 mm. The calculated design wall thickness shall be expressed as an even multiple of 1.5 mm. Design Considerations of ASTM F1216 for fully deteriorated conditions, and the following design parameters:"
6/13/16	KSW	2537-5	2.02E Table	In the table under the Soil Depth Parameter delete the phrase "refer to drawings" and replace with "10'-0" or per actual site conditions, whichever is greater"
6/13/16	KSW	2537-6	3.03	Replaced paragraph 3.03 with the following: "The Contractor, when required, shall provide for the flow of sewage around the section or sections of pipe designated for repair. Plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system shall make the bypass. Refer to Section 1000, Part 1.07 for bypass pumping requirements."
6/13/16	KSW	2537-8	3.10.C	After last sentence add the following: "Pull-in type methods of tube insertion are not allowed."
6/13/16	KSW	2930		Replaced Section 2930 in its entirety
6/20/16	GER	3000-5	2.01.D	Replaced the "6" under Minimum Sack Mix with "6 ½" under Column A.
2-3-17	KSW	2536.3	3.02.A.1	Delete the words "Cradle, Arch or"
2-3-17	KSW	2536-4	3.02.A.2.a	Deleted subsection "a" and combined. No other Subsections so not needed.
2-3-17	KSW	2536-4	3.02.A.4.a	Delete subsection "a" and combined. No other subsections so it was not needed
2-3-17	KSW	2536-4	3.02.A.5	Added new paragraph 5. Compacted Clay Backfill (DI Special Case Only with JCW Prior Approval): Clay material shall be select clay material separated from excavated materials, free of clods, clumps, debris, organic material, and stones, compacted so as to obtain 90% of maximum density at optimum moisture plus or minus 2%, as determined by ASTM D 698.
2-3-17	KSW	2536-6	3.03.A.8	Delete the word "cradle"
2-3-17	KSW	2536-8	3.03.C.5.b	After the words "should be" add the words "avoided and connected by means of a Snake Bite Dryconn Direct Bury Lug by Copperhead Industries Direct Bury Kits". Delete the words "split bolt or compression type connector". Replace first sentence with "Tracer wire for sewer pipeline and discharge piping shall be a (12 AWG) extra-high-strength copper-clad steel conductor (EHS-CCS), insulated with a 45 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts. <u>EHS-CCS conductor must be a 21% conductivity for locating purposes, Break load will be 1150# minimum.</u> HDPE insulation shall be RoHS compliant and utilize virgin grade material. Insulation

Date	Modified By	Section No.	Paragraph No.	Description
				color shall meet the APWA color code standard for identification of buried utilities. Tracer wire shall be <u>Copperhead™ SoloShot™ Extra High Strength</u> , EHS-CCS HDPE 45 mil insulation or equal.”
2-8-17	KSW	2536-11	3.08	After the words “SECTION 3000-CAST-IN-PLACE CONCRETE” add the sentence “Compacted Clay backfill as specified in 3.02 may only be used with prior approval from JCW.”
2-9-17	KSW	2530-5	2.01.A.12.a	After the word “Corporation,” added the following: “Gator Wrap by Infi-Shield”.
3-13-17	KSW	2536-15	3.11.C	Add the word “all” before RCP.
3-13-17	KSW	2536-8	3.03.E	Corrected Reference Source Error, changed to Paragraph 3.13.A
3-13-17	KSW	2536-18	3.13.B	Paragraph Reference changed to 3.13.A
3-14-17	KSW	2537-7	3.07	After the first sentence added the following: The Contractor or lining installer shall apply experienced judgment and coordinate with the Owner to determine whether or not a service line is active. If approved by the Owner, the Contractor will dye test the approved service lines in advance of lining the segment. The Contractor shall provide a clear record of all service connections that are re-installed after lining the pipe.
10-17-18	KSW	2537-2	1.07.B.1	Change 200,000 feet to 500,000
2-7-19	KSW	Table of Contents		SECTION 3000 delete “Cast In Place”
2-7-19	KSW	1000-1	1.06	After the phrase “one (1) set of approved” add “electronic”
2-7-19	KSW	1310-2	Part 3 3.01.C	Delete “Digital” and replace it with “Electronic” in the two places it is shown in this section
2-7-19	KSW	1310-2	Part 3 3.01.L	This section should read as follows: All electronic storage media and files shall be properly identified with location, project name and date in a manner acceptable to JCW.
2-21-19	KSW	1310-3	Part 3 3.01.O	This section should read as follows: All video shall be provided to JCW on an electronic storage media with Windows Media Video file format (.wmv).
2-21-19	KSW	1310-3	Part 3 3.01.S	This section should read as follows: Electronic files are to be provided to JCW, Owner’s Engineer, and the Contractor.
2-21-19	KSW	1400-2	Part 3 3.01.D	The first sentence in this section should read as follows: All video shall be provided to JCW on an electronic storage media with a Windows Media Video file format (.wmv).
2-21-19	KSW	2315-1	Part 2 2.01.F	Delete with words “CAST-IN-PLACE”
2-21-19	KSW	2410-3	Part 2 2.03	Delete with word “liner” and replace it with “annular”
2-21-19	KSW	2410-3	Part 2 2.04	Delete the word “Liner” and replace it with Annular”
2-21-19	KSW	2410-3	Part 2 2.04.A	After the words “filled with” add an “n” after the “a” and delete “grout” and replace it with “annular”. In the second sentence delete “grout” and replace it with “annular”.

Date	Modified By	Section No.	Paragraph No.	Description
2-21-19	KSW	2410-3	Part 2 2.04.B	After the word "propose" insert an "n" after the "a" and delete "liner" and replace it with "annular".
2-21-19	KSW	2410-6	Part 3 3.09	Delete the word "Liner" and replace it with "Annular"
2-21-19	KSW	2445-1	Part 1 1.01	Delete the last sentence in this section in its entirety: "Any trenchless method of construction not utilizing a steel or reinforced concrete casing pipe shall not be considered a boring operation."
2-21-19	KSW	2445-5	Part 2 2.05	Delete the word "Liner" and replace it with "Annular" in both places
2-21-19	KSW	2445-9	Part 3 3.10	Delete the word "Liner" and replace it with "Annular" in both places
2-21-19	KSW	2530-1	Part 1 1.01.B	Remove the hyphen between pre and cast and combine
2-21-19	KSW	2530-1	Part 2 2.01.A	Remove the hyphen between pre and cast and combine in the two places in this section
2-21-19	KSW	2530-2	Part 2 2.01.A.2, A.3.a, and A.3.b	Remove the hyphen between pre and cast and combine
2-21-19	KSW	2530-4	Part 2 2.01.A.8.a	After the words "bead dimension of" add "3/4 to"
2-21-19	KSW	2530-4	Part 2 2.01.A.9.b	Remove the hyphen between pre and cast and combine in the two places in the section
2-21-19	KSW	2530-5	Part 2 2.01.A.11	Remove the hyphen between pre and cast and combine
2-21-19	KSW	2530-8	Part 3 3.03.A.1 3.03.A.2 and 3.03.B.2	Remove the hyphen between pre and cast and combine in all places where this occurs in these sections.
2-21-19	KSW	2530-9	Part 3 3.03.B.2.a, b and c	Remove the hyphen between pre and cast and combine in all the places where this occurs in these sections.
2-21-19	KSW	2530-9	Part 3 3.03.B.2.c	After "the words "minimum of" delete the word "one" and add "a double".
2-21-19	KSW	2530-9	Part 3 3.03.E	Remove the hyphen between pre and cast and combine
2-21-19	KSW	2530-9	Part 3 3.03.F	Remove the hyphen between pre and cast and combine
2-21-19	KSW	2530-12	Part 3 3.06.C.2	In the second sentence after the words "Method 1" delete the letter "A"
2-21-19	KSW	2532-8	Part 3 3.03.A.2	In this section change the reference to Paragraph 3.01 to Paragraph 3.02 both locations
2-21-19	KSW	2534-1	Part 2 2.01.C	In the third sentence after the word "provide" add the words "electronic submittals" and delete the words "three (3) copies"

Date	Modified By	Section No.	Paragraph No.	Description
2-21-19	KSW	2534-15	Part 2 2.03	In the fourth sentence after the words "allowed on" add "DI and"
2-21-19	KSW	2536-7	Part 3 3.03.C.4	In the third sentence after the words "coordinates to JCW in", add an "n" to the "a" and delete the word "digital" and add the word "electronic". In the following sentence delete the word "digital" and add the word "electronic".
2-21-19	KSW	2536-9	Part 3 3.03.G.1	After the first sentence, add the following sentence: "A JCW inspector must observe the coring and installation of the saddle. If coring is on DI pipe, the coring edges must be coated utilizing the Protecto 401 Touch-Up kit."
2-21-19	KSW	2536-10	Part 3 3.03.G.4	In the second sentence, after the word "approved" add "either a TST-4 or TST-6, with the TSPK-46 pressure kit", and delete the following part of this sentence: "a Multi fittings Saddle Tee Casket Hub and Gasket Skirt with Stainless Steel Bands". Also delete the following "D3034, F170" and replace it with "D5926".
2-21-19	KSW	2536-10	Part 3 3.04.A	After the word "Mission" add "Flex Seal ARC Shielded Adjustable Sewer Repair Coupling" and delete "EZ Flex Coupling". Add a comma after RC Coupling and add the following: "Maxadaptor Coupling conforming to ASTM A240, C425, C1173, D5926,"
2-21-19	KSW	2536-15	Part 3 3.11.C	After the first parenthesis, insert a capital "A"; should read (All RCP...
2-21-19	KSW	2537-1	Part 1 1.04.D	Delete "(CD)"
2-21-19	KSW	2538-5	Part 3 3.01.H.4	This paragraph should read as follows: "Connections to existing service laterals shall be Mission Flex Seal ARC, Fernco Strongback RC Coupling, Maxadaptor Coupling conforming to ASTM A240, C425, C1173, D5926, or approved equal. Delete the rest of the section.
2-22-19	KSW	3000-1	Title	Delete the reference to "CAST IN PLACE"
2-22-19	KSW	3000-3	Part 1 1.05.A.18	Add the following new Section 18 "C478 Standard Specification for Circular Precast Reinforced Concrete Manhole Sections (sections 4.1.5.1, 4.1.5.2, and 4.1.5.3)" and renumber next two sections.
2-25-19	KSW	3000-3	Part 1 1.05.A.21 and A.22	Add the following new Sections: 21 "C1017 Standard Specification for Chemical Admixture for Use In Producing Flowing Concrete" and 22 "C1611 Standard Test Method for Slump Flow of Self-Consolidating Concrete". Renumber the remaining sections.
2-25-19	KSW	3000-4	Part 1 1.06.A.4	After the word "furnish" insert the words "an electronic copy" and delete the words "five (5) copies". After the word "follows:" delete all references to "1 Copy"
2-25-19	KSW	3000-5	Part 2 2.01.A	After the words "28-day" add the word "minimum"
2-25-19	KSW	3000-5	Part 2 2.01.D	In the row entitled "Maximum Slump" add the following additional text: "(Cast-In-Place or Precast Structures)". Insert another row below Maximum Slump and insert the following text: In Concrete Type – Maximum Slump Flow Test (inches) (Precast Structures Only); and in Column A insert the number 22. In the row entitled "Air Entrainment" under Column A add .5 after the 6 and .5 after the 1 and in Column B add .5 after the 6 and .5 after the 1.

Date	Modified By	Section No.	Paragraph No.	Description
2-25-19	KSW	3000-6	Part 2 2.02.B	In the last sentence of this section change the number 7 to an 8
2-25-19	KSW	3000-7	Part 2 2.06	Add the following sentence at the end of this section: "Air Entraining agent for Precast Structures shall comply with ASTM C260 and C478 (sections 4.1.5.1) and shall be GCP-DARAVAIR-1000, or approved equal."
2-25-19	KSW	3000-7	Part 2 2.07	Before the sentence beginning with "Other admixtures shall not be..." add the following sentences: "Plasticizer agent for Precast Structures shall comply with ASTM C1017, C478 (section 4.1.5.3) and be GCP-QUANTEC PL-490 or approved equal. Hydration Stabilizer agent for Precast Structures shall comply with ASTM C478, 4.1.5.2 and C494 and be GCP-RECOVER or approved equal. High Range Water Reducer agent for Precast Structures shall comply with ASTM C478 (section 4.1.5.2) and C494 and be GCP-ADVA Cast 585 or approved equal. Water Reducer agent for Precast Structures shall comply with ASTM C478, 4.1.5.2 and C494, 3.1.3 and be GCP-MIRA 110 or approved other."
		3000-9	Part 3 3.02.B	After the phrase "ASTM C494" add the following "or C1017 as applicable."
5-10-19	GER	2315-7	Part 3 3.02 B	Change "and" to "or" in the first line and add "or under pavement" after "rights-of-way" in the second to last sentence.
5-10-19	GER	2315-7	Part 3 3.02 C	Add "and Not Under Pavement" after "Right-of-way" in the first line and "or not under pavement" in the last sentence after "rights-of-way".

END OF SECTION 10

