

Plan Holder Questions

2019 Sewer Lining Project

As of: 12/7/2018

Date	Question	Issue Addendum?	Reason
	<p>Q1 1. Page 22 of 45 states: "The minimum thickness requirements shall be 0.236 inches (6mm) thick"</p> <p>a. Can you confirm this refers to the "installed" thickness? This would make sense and ensures no contractor installs a 4.5mm liner. The minimum design thickness for a typical 8" pipe, 10' deep with highway loading would be 3.5mm, so an installed thickness of 6.0mm would cover virtually any 8" or 10" sewer pipe. If this refers to the a 6.0mm "finished" thickness, it would require us to install a 7.5mm liner (due to some compression and stretching) which would be difficult/impossible to install and raise costs unnecessarily.</p>		
	<p>A1 Yes, the installed thickness shall be 6mm.</p>	N	Clarification question.
	<p>Q2 2. Page 24 of 45 states: "Testing performed by the ENGINEER on the finished liner shall include flexural modulus tests, tensile strength tests, delamination tests and thickness tests."</p> <p>a. Can you confirm the contractor will not need to pay for any test performed by the engineer on the samples submitted to the engineer?</p> <p>b. This pipe should not be tested for "tensile" strength. As noted in ASTM F 1216, Section 7.1.2, "tensile" strength is tested "for pressure pipes only." I've attached ASTM F 1216 for your reference.</p> <p>c. The delamination test is an involved, expensive test. For this reason, it's not typically performed on projects, but you could require the contractor to submit 3rd party delamination test results of the product prior to the start of the project.</p>		
	<p>A2 No, the contractor will not pay for testing if performed by Engineer.</p>	N	Clarification question.

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A3	Yes, if Engineer decides to run this "tensile" strength test, it shall be performed on pressure pipes only.	N	Clarification question.
A4	Yes, This is not something typically done and if Engineer decides to run the delamination test, the Village will cover all cost.	N	Clarification question.
Q3	<p>3. Page 24 of 45 states: "The water tightness of the new liner shall be gauged while curing and under a positive head in accordance with Section 31-1.11 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", fifth edition or using air pressure if steam curing is utilized."</p> <p>a. If we install with hot water, this spec is fine. However, 90% of small diameter installations are performed with the "air inversion, steam cured" (AISC) process. This uses 95% less water and saves time because we don't have to wait for the 55 degree water heat up to temperature. AISC allows us to start the cure time much quicker and reinstate resident laterals sooner to reduce the risk of backups. It also means less hoses running from fire hydrants. Your spec seems to be asking for an air pressure test if we use the AISC method. This is very problematic for CIPP because CIPP is designed as a water tight solution, not an air tight solution. If this test remains a requirement, it would push contractors to use water installs for the entire project which is much less efficient and raises the cost. Gerry Muenchmeyer, NASSCO's previous Technical Director, recommends CCTV or visual inspection instead of air testing or hydrostatic leakage testing. The theory is that if there is a leak, you will see it. The post video and physical property testing are the best tool to use for quality evaluation and that testing is already accounted for in your spec. Would you issue an addendum removing this air pressure test from your spec?</p>		
A5	Air Pressure testing will not be required please remove said paragraph from section 3.12 of the Special Provisions.	Y	Addendum 1