9480203 MISCELLANEOUS TYPES OF PIPE
COMMENTS FROM INDUSTRY REVIEW

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John Previte
D1 Specifications
863-519-2676

Comment:
Reword last sentence of **948-2.3.2:**
From:
Manufacturer may use ground class II pipe for reworked plastic, but not class I.
To:
Manufacturer may use ground class II, but not class I, pipe for reworked plastic.

Response: Agree

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Greg Weich
District 1 & 7 Materials, Precast / Special Materials Coordinator
2922 Leslie Road, Tampa, Florida, 33619
Office# 813-744-6070, Fax# 813-744-6069, Cell # 813-545-6786
gregory.weich@dot.state.fl.us

Comments:
Rudy , I would offer that the below changes, in yellow, be made to this 948 revision in order to bring consistency from the Materials Manual regarding fabricated products sent to job sites. You may want to contact Ghulam or Mario regarding these changes I've recommended for further input.

948-2.3 High Density Corrugated Polyethylene Pipe (12 to 60 inches):

948-2.3.1 General:

All Pipe Plants shall provide a notarized certification statement to the Department project administrator from a responsible company representative certifying that the pipe will be manufactured in accordance with the requirements set forth in the Contract Documents and Plant's approved quality control plan. Ensure that each shipment of Pipe to the project site is accompanied with a QC signed or stamped delivery ticket providing the list of products and the actual mean diameter of the pipe. All pipe shall have an affixed legible QC stamp mark or label from each plant.

Response: No objection.

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Ghulam Mujtaba
352-955-6685

ghulam.mujtaba@dot.state.fl.us

Comments: (1-21-10)

1. Table 1 –Title: There is no need to mention 100 year in the title, the footnotes provide this description for Type S

Response: Need the language clear in the title

2. Subarticle 948-2.3.3 second paragraph: Change “Director, State Materials Office “ to either “Director, Office of Materials” or “State Materials Office”.

Response: No objection. State Materials Office will be used.

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Doug Holdener
dholdener@cemexusa.com

Comments: (2-1-10)

1. Under paragraph 948-2.3.2, in addition to the proposed sentence on using reworked plastic, the following language should also be considered: **"Recycled plastic materials are not allowed."**

Response: This additional language is not needed because recycled plastic will not meet AASHTO M 294. No changes made.

2. The FDOT's report titled Protocol for Predicting Long-term Service of Corrugated High Density Polyethylene Pipe listed numerous recommendations for assuring long term service life through proper design and installation criteria, as well as the material testing properties. Those recommendations are listed in Chapter 3 (Construction Considerations) of that report. The Appendix B and C of that report specifically states changes to the type of backfill materials for Class II HDPE.
   These additional requirements for Class II should also be included in the Section 948 specification since they were deemed critical to the long term installed service of that pipe.

   The specific requirements are: Use A-1 and A-3 soils, with a maximum of 50% of the particle sizes passing the 0.150 mm (No. 100) sieve and a maximum of 20% passing the 0.075 mm (No. 200) sieve. If these limits are not met, treat the backfill as and A-2-4 or A-2-5 material.

Response: 948 is a material specification, not an installation document. This comment will be forwarded to the State Drainage Office for possible changes to other sections.

3. How is “failure” defined in the Stress Crack Resistance tests? In other words, how do you determine that a specimen has failed?

Response: Process is part of test method FM5-573. Calculation is done assuming 23F and 500psi stress. No changes made.

Carl Tyner
352-343-8488
carl.tyner@qualityculvert.com

Comments: (2-2-10)
I am quite disturbed about the proposed change to 9480203 to the HDPE testing requirements that mandates which Lab facilities are approved for the 100 year DSL program. We, the manufacturers, would now be obligated using only the G.A.I. accredited labs, with very little consideration to a Lab that has performed quite well and helped us all achieve positive and important data, which has been an invaluable asset to FDOT, the HDPE producer, as well as the resin suppliers.
The Lab in question is ISO certified and typically requires more diligence to achieve, making it just as qualified, or more so, than other accredited labs. However, there may be some benefits having multiple G.A.I. Labs, such as, being able to test multiple pipe sizes, simultaneously, at multiple Labs, which could expedite results, exception being the I.O.I.T. test. With this, more variables with procedures are greater, as experienced during the RR testing for initiating the DSL Program.
In addition, being the Producers are absorbing the costs for this, I would hope for competitive pricing, yet having the option for choosing and scheduling a Lab of their choice, approved by FDOT.
All this being said, I would request some confirmation that any current testing, and testing yet to be performed on specimens already in custody of our contracted Lab, will be completed and not interrupt our anticipated schedule for both any Interim of Full Approvals for the DSL Program.

Response: Change will be moved to January 2011 to give labs a chance to get the appropriate approvals. In addition the language will be modified to allow ISO 17025 labs accredited using personnel with actual experience running the tests methods for Class II pipe.

Michael Pluimer
469-499-1049
Plastics Pipe Institute – CPPA Division
mpluimer@plasticpipe.org

Comments: (2-2-10)
Regarding the proposed changes to Specification 948, specifically Section 948-2.3.3, the Plastics Pipe Institute (PPI) offers the following comments:

The proposed language in Section 2.3.3 represents a significant departure from the original language where FDOT allowed testing to be performed by either a GAI-accredited laboratory or another laboratory approved by the PPI and meeting the requirements of ISO 17025. This was what PPI initially agreed to and was stated in Materials Bulletin 06-05, section “a”: “The laboratory Accreditation program shall be in accordance with Geosynthetic Accreditation Institute (GAI) or other accreditation program meeting the requirements of International Standards Organization (ISO) 17025.” This new proposed change is concerning in light of the volume of testing required in Specification 948 and the limited number of labs that

are currently GAI accredited. Furthermore, we feel the ISO 17025 requirements are robust and sufficient to ensure tests are performed in accordance with the specification.

We expect the volume of tests to continue to expand as more manufacturers produce Class II HDPE pipe for Florida. Also, the FDOT protocol for 100-year service life for HDPE pipe is being adopted by other states, which will place even more demand on laboratories for testing. We do not feel it is necessary to place additional costs on those laboratories which already meet the requirements of ISO 17025 to qualify them to participate in the program.

While the GAI program is certainly a very good and robust accreditation program, it does not seem necessary to limit lab accreditation to just GAI. The GAI accreditation program is modeled after ISO 17025 and other ISO standards. Per the GAI website (downloaded 1/28/2010): "The GAI framed the accreditation programs around the following three international known standards; ISO 9000 Quality Management Systems-Requirements, ISO 17025 General requirements for the competence of testing and calibration laboratories and ISO 17011 Conformity Assessment – General requirements for accreditation bodies accrediting conformity assessment bodies. Although the GAI-LAP models itself after these standards it does not profess to be affiliated with either ISO or their standards. Rather the program is a hybrid one using the above as models but tailored to the immediate needs of the geosynthetic testing community." Since GAI-LAP is based in part on the ISO 17025 quality standard, the ISO 17025 accreditation should be considered a more robust or conservative requirement and should continue to be included as an option to demonstrate technical competency for these methods.

In conclusion, the PPI requests that the language in Specification 948, section 2.3.3, remain as currently stated, and not be changed to require GAI-LAP as the only approved accreditation program. If further clarification is deemed necessary by FDOT, we suggest adopting the language from the 06-05 Materials Bulletin, which states that "the laboratory accreditation program shall be in accordance with the Geosynthetic Accreditation Institute (GAI) or other accreditation program meeting the requirements of International Standards Organization (ISO) 17025."

Response: Any specification change is done with almost 7 months before the release date. Materials bulletins are used whenever a correction or clarification is needed to a specification right away. The bulletins are valid until the specification is updated incorporating the changes of the materials bulleting. The imminent release of the 100 year full protocol requires labs to be accredited to a much rigorous standard than that provided by ISO procedures. The language will be moved to the January 2011 specification change and the language will be modified to allow ISO 17025 labs inspected by accreditation agency personnel with actual experience running the tests methods in the specification.

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Louis Leonardi
951-684-3472
lleonardi@kwhpipe.ca

Comments: (2-2-10)
Section 948-4.3 Discrete Pipe Liner – Paragraph (2) High Density Polyethylene Profile Wall
Please reinstate the reference, "Discrete high density polyethylene pipe liner shall meet the

requirements of ASTM F 894 and shall have a minimum cell class of 334433C." AASHTO M-294 pipe is more commonly described as circular corrugated HDPE and is available in sizes from 12" to 60". Profiled Wall HDPE pipe is specifically referenced in ASTM F 894 where pipe sizes range from 10" to 120". The specified minimum cell classification noted in ASTM F 894 is 334433C.

Response: Agreed. Section 948-4.3 Discrete Pipe Liner will be rewritten as follows:

948-4.3 Discrete Pipe Liner: Discrete pipe liner shall be round, flexible or semi-rigid liner, manufactured in lengths that may be joined in a manhole or access pit before insertion in a host pipe.

(1) *High Density* Polyethylene *Solid Wall*: Discrete *high density* polyethylene pipe liner shall meet the requirements of ~~ASTM D-3550 or~~ ASTM F-714 *or AASHTO M-326* and shall have a minimum of cell classification of 33*4*5420*64*c.

(2) High Density Polyethylene Profile Wall: Discrete high density polyethylene pipe liner shall meet the requirements of ASTM F-894 and shall have a minimum cell classification of 334433C.

(3) High Density Polyethylene Circular Corrugated Wall: Discrete high density polyethylene circular corrugated pipe liner shall meet the requirements of *AASHTO M-294* and shall have a minimum cell classification of *35400*c.

(4) Polyvinyl Chloride: Discrete polyvinyl chloride pipe liner shall meet the requirements of ~~ASTM F-789,~~ ASTM F-794, ~~or~~ ASTM F-949*, or AASHTO M-304* and shall have a minimum cell classification of 1245~~6b~~*4*.

(5) Fiberglass: Discrete fiberglass pipe liner shall meet the requirements of ASTM D-3262.

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From the State Specifications Office: 5/10/10. After talking with Greg Weich, the last 2 paragraphs in 948-1.7 and last 3 paragraphs in 948-2.3 will be deleted and replaced with "All pipe produced and shipped to the job site shall meet the requirements of 105-3.2."