

Florida DOT Pipe Advisory Group

Meeting Minutes - April 26, 2007

Attendees

Rod Powers, FDOT
Brian Blanchard, FDOT
Jim Schluter, Contech
Bill Burnette, Contech
Justin James, Contech
Jon Sickels, ADS
Ron Craig, Hanson
Al Hogan, Contech
Paul Harkins, Hardie Pipe
Angel De Jesus, Hanson
Carl Tyner, Quality Culvert
Brian Hunsicker, US Concrete Pipe
Lora Hollingsworth, FDOT
Sheila Blanchard, FDOT Daughter
Risha Prasad, FDOT Daughter
Sid Hilton, Chemax
Greg Bohn, ADS
Jeff Hite, Rinker

Michael Pluimer, PPI
Doug Holdener, Rinker
Mike Glasgow, Uni-Bell PVC
John Johnston, J. Johnston Company
Richard Kessler, FDOT
Tom Fussner, ADS
Keith Morrison, Contech
Rob Adamson, Contech
Brent Brewbaker, Contech
Bob Slicker, ADS
Grace Hsuan, Drexel
Ron Stepanovoch, Tone & Associates
Dale Pennington, Metal Culverts, Inc.
Sean Hapeman, Metal Culverts, Inc.
Bob Kerr, KWH Pipe, Inc.
David Sadler, DOT
Ananth Prasad, DOT
Rick Renna, FDOT

Welcome from Chief Engineer Ananth Prasad

Ananth Prasad welcomed members of the PAG. He stated that dialog was welcomed by the FDOT, but that FDOT, as the owner, must ultimately make the final decisions on matters of policy. Every pipe has issues that affect its performance, he stated, and FDOT has the responsibility to consider long term viability.

HDPE Pipe protocol - Grace Hsuan, Drexel / Rod Powers

Dr. Hsuan gave a presentation covering the following topics:

- Review of Previous Work
- Round Robin Tests
- Establishment of 95% confidence target/Minimum Failure Time/TTG
- Arrhenius (RPM) to Popelar Shift Factors

The presentation is attached to this document:



Dr. Hsuan PAG
4-26-07.pdf

Rod Powers discussed the new index test currently being developed, the Falling Weight Index Test, which assesses material toughness, a measure of the initial strength of the HDPE pipe material. He affirmed that this test was a QC/QA index test, not a qualifying test. Currently a study is being carried out by Drexel University where we hope to establish correlations of toughness values to other attributes of the pipe.

HDPE Pipe Materials Technical Review Group - Ananth Prasad / Rod Powers

Section 948 Specification Implemented in July 2005 and created Class II HDPE Pipe and defined properties and relevant test methods (protocol). The HDPE Materials Technical Review Group (TRG) was formed in March 2006. Three face to face meetings were held. The draft final report has been reviewed and comments from TRG members included. FDOT performed editorial review only. The HDPE Materials TRG Final Report was released in April 2007. The TRG report conclusion was as follows:

“Based on current science, standard test methods, and known failure mechanisms for PE, the FDOT interim specification (Section 948) is adequate to qualify corrugated PE pipe for Class II pipe in the State of Florida.”

DOT will continue to look at research issues, as long as value is added. Issues that are academic only will receive less attention. FDOT is moving forward with current specification as written.

Owners will need to be qualified, size-specific, and then the DDrEs will be notified that a Cl. II pipe is available.

2 RR labs gave shorter failure times during the round robin testing – Dr. Hsuan speculated that residual igepal may have contaminated the bath water, resulting in shorter failure times. Those labs’ results were not thrown out. QC / QA processes will be initiated to ensure that quality of product is maintained. A listing of pipe manufacturer’s with accepted quality control plans for flexible pipes is available at the State Materials Office website. Materials Office staff is equipped and available to perform Independent Assurance testing and inspection.

Construction Issues - David Sadler

David Sadler related a number of construction issues as bulleted below:

- Installation problems During Construction – typically installation issues. Manufacturers have a parental responsibility towards pipe contractors. Laser ring reports are just now starting in the field. Currently spec calls for inspection before application of the friction course.
- Early Video Inspection with Subsequent Reduced Final Inspection – FDOT wants early inspection to allow easier repair – a QC tool. Contractors are not yet getting the message that early inspection is profitable to the Contractors, as opposed to tearing down previous work. FDOT is considering a full inspection at about 4 ft. of cover and then a later, random check before the friction course. The idea is to avoid expensive, invasive repairs.

- Laser Ring Inspection Implementation: Dave will bring some sample projects to the next PAG meeting. There are no certification requirements for laser ring contractors. Conclusions from laser ring inspections will be made by engineers, not inspectors.

Activities of the Pipe Installation Task Group - Rick Renna

The Pipe Installation Task Group (PITG) was originally created to examine the practicability of field inspectors' perceiving pipe deflections greater than 5%. With the advent of the laser ring inspection, this issue is on hold but other matters are being considered. FDOT's vision is to obtain defect-free pipe, not planned poor construction or automatic acceptance of defective pipe installations. Thus, when installation problems happen, a case by case consideration is employed to resolve problems. Some current efforts of the PITG are shown below:

- Cataloging of Pipe Field Repair Methodology – designed to be a tool box rather than re-invent the wheel every time a problem occurs. Progress has been a bit slow as industries send in their information.
- Inspectors' Training – needs to emphasize more on plastic pipes and current inspection tools

Other Issues / Questions from Industry

(1) Question: What is the status of the pipe joint spec change?

DOT Response: The requirement for water tight joints (5 psi) was in place beginning with Jan. 2007 letting. Joints should not be leaking if installed properly.

(2) Ananth: Are the Manufacturers working with Contractors to provide proper installation?

Industry Response: Manufacturers are providing guidance and recommendations, and refusing to sell to repetitively poor performing contractors.

Ananth suggested regional training by the Manufacturers

(3) Question: What was the reasoning behind the merging of pipe pay items?

DOT Response: Pipe pay items are merged when unit prices are not too far apart. The Department desires to minimize the number of pay items when feasible.

(4) Question: Would the DOT consider paying for pipe inspection separately?

DOT Response: Pipe inspection is paid with the pipe length. DOT will be looking at possibly changing this as we consider changes in our inspection process (early inspection discussed above). If DOT moves forward with early inspection, the change would not be implemented until January 2008.

Date for the Next PAG Meeting

The PAG reached consensus that future PAG meetings should not occur at regular intervals, but that we should meet when issues arise.