Florida Pipe Advisory Group

Meeting Minutes – June 3, 2005

Attendees

Rod Powers, FDOT
Brian Blanchard, FDOT
Justin James, Contech
Bill Burnette, Contech
Jim Park, ADS
Rick Traylor, Rinker
Tim Toliver, Hancor
Jeff Chastain, Hardie Pipe
Carl Tyner, Quality Culvert
Brian Hunsicker, US Concrete Pipe
Ed Rodriguez, Hancor
Greg Bohn, ADS
Ananth Prasad, FDOT
Dave Sadler, FDOT
Wayne Turner, Hanson
Ron Craig, Hanson
Jeff Hite, Rinker
Michael Pluimer, PPI
Doug Holdener, Rinker
Robert Greer, FDOT
Keith Morrison, Contech
Kevin Thibault, FDOT
John Johnston, FCPI
Stephen Boros, PPI
Tom Fussner, ADS
Steve Hoesing, Rinker
Mike Swedick, ADS
Ed McCloskey, Hanson
Rick Renna, FDOT

Welcome from Asst. Secretary Kevin Thibault

Mr. Thibault thanked Industry representatives for their attendance. He stated that the Department welcomes advice from Industry in the process of the Department's decision-making.

Update on HDPE Specification – Rod Powers, FDOT

1. QC/QA Standards: The PPI, with Rod Powers' participation, has crafted recommended Industry QC/QA standards for corrugated polyethylene pipe. The Standards are wrapped around AASHTO M-294 but are more stringent than M-294 since the Standards target FDOT Class II HDPE Pipe. Questions and comments are welcome in electronic format within two weeks.

2. Materials Bulletin: The Materials Bulletin is the vehicle by which the new QC/QA Standards are implemented. Key items in the Bulletin include laboratory accreditation, FDOT approval process, sample authentication, and testing in response to changes in input materials. Melt Index variations, targeted to the Manufacturers' design, are limited to 30% before re-qualification is required. This variation is comprised largely of established testing precision. Questions and comments are welcome in electronic format within two weeks.
3. Materials Task Group: The Department is exploring the creation of a Materials Working Group to look at ongoing issues of fracture mechanics and oxidation in HDPE Pipe. The group would be facilitated by Rod Powers and consist of Dr. Hsuan, possibly an expert endorsed by the FTBA, and other experts. The purpose of this group would be to broaden the base of academic input into the Department's decision-making on HDPE Pipe specifications. Rick Renna added that this initiative should not be misconstrued as insecurity on the part of the Department, but rather as a matter of thoroughness in a difficult technical discipline.
4. Ongoing Round Robin Testing: Seven labs are involved in round robin testing of the HDPE pipe junction as outlined in the new FDOT specification. The test, essential to defining the 95% confidence required in the HDPE Class II pipe specification, is targeted at establishing testing variability in the range of the required stress and temperature of the new HDPE pipe specification.

Construction Policy Issues – Dave Sadler, FDOT

1. Field Identification of Class I and Class II HDPE Pipe: A logical, understandable code, similar to codes on other types of pipe, will be applied during the manufacturing process.
2. 2-Year Contractual Latent Defects / 15-year Florida Statute Latent Defects: Construction is pursuing the 2-year contractual latent defects and 15-year Florida statute latent defects provisions to remedy obvious construction and manufacturing errors that become evident within 2 or 15 years after final acceptance. For example, mast arm footers were discovered to be undersized when mast arms were failing during the 2004 hurricane season.
3. Deflection Enforcement: Flexible pipes are required by the FDOT specifications to be removed and replaced if deflection of > 5% is observed. Rod Powers' mobile deflectometer is expected to be available for use in late 2005. D6 uses a mandrel to test deflections. When available, the District Materials Offices will use the deflectometer as a QA measure.
4. Performance of Pipe Joints in the Field: RCP joints are expected to be tightly fitted together, with joints on all types of pipes wrapped securely with filter fabric. If a video tape shows leaking joints, the joints will be sealed or the pipes replaced.
5. Cracks in Pipes: RCP cracked all the way through the wall will be replaced, as well as ripped metal pipes, will be replaced. Autogenous healing of RCP occurs in green pipe, not in cured pipe, and will not be allowed as a basis for excusing cracks in RCP.

6. Pipe Manufacturers' "Parental" Involvement with Contractors: Manufacturers have a vested interest in their pipes' being properly installed. The Department recommends that manufacturers take a role in training their contractors. The FTBA may be a viable venue through which to educate contractors.
7. Change of Allowable Pipe Materials in Construction Phase: If a pipe material becomes available after the plans preparation process and a contractor wishes to use this newly available pipe, required structural clearances must be satisfied.

Pipe Installation Task Group – Rick Renna, FDOT

The Department is planning to initiate a task group to look at flexible pipe specs pertaining to installation – possibly rigid pipe specs later. The initial focus will be on the following:

1. Validity of Inspection Approach: Can one see a >5% deflection with front lighting only, front and back lighting, etc. Can one see a bust in line and/or grade?
2. Can we use thicker lifts, say above the pipe spring line?
3. Other issues suggested by the Task Group

Tentative Membership: Mike Pluimer (PPI), Jim Schluter (Metal / PVC), Rick Traylor (ACPA), Contractor (FTBA), Jeff Chastain (Hardie Pipe), Tim McGrath (SG&H), David Sadler (FDOT), Rick Renna (FDOT)

Water-tight Pipe Joints – Rick Renna, FDOT

Industry comments to the proposed specification change and FDOT responses to Industry comments were discussed:

1. No field air tests are enacted under this specification change.
2. The current 2 psi target is equal to a differential head of 4.6 ft. within our pipe system. In practice, greater pressures exist making a 2 psi joint non-conservative for many FDOT applications. The 5 psi pressure equates to 11.5 ft. of head. FDOT systems typically experience less head than this. A 10 psi joint capacity is unnecessary in shallow-burial Florida, especially since the metal pipe does not have a national standard requiring 10 psi.
3. Structural integrity (keeping the surrounding soils out) and hydraulic roughness are not the only issues with pipe joints. Environmental water quality treatment designs, groundwater table drawdown, and groundwater contamination concerns make water-tight joints desirable.
4. Testing time will be 10 minutes with no leakage. Use ASTM D3212 for flexible pipes and ASTM C443 for rigid pipes.
5. No change in construction oversight, but watertight standard will help end any argument that infiltration is acceptable.

Further comments from Industry are welcome within 2 weeks. Mr. Renna will then send a revised specification to the PAG for review and comment, with the hopes of resubmitting the specification in January 2005 for implementation in July 2006.

Updating Inspector Training Material– Rick Renna, FDOT

FDOT is updating their pipe inspection course using a team of FDOT construction personnel and a contractor. The revised course contents will contain more discussion on the installation of light-weight pipe and will be submitted to the PAG for review. [Note: the current inspection course was sent to PAG members on June 3, after the meeting.]

Next PAG Meeting

The next PAG meeting will discuss any follow-up comments on the HDPE Pipe QC/QA, as well as any further news on the Departments updating of QC/QA policies. The next meeting is planned in the third week of October. [Note: the meeting date was tentatively set to Friday, October 28 due to scheduling conflicts.]

The meeting was adjourned at 12:07 pm.