4300202 PIPE CULVERTS
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Charles Boyd
4-26-12

Comments: (4-26-12, Internal)
The proposed spec should refer to something like "reinforced soil walls or slopes" instead of "MSE walls" to address all reinforced soil structures and walls, not just MSE walls. See Larry Jones for correct terminology to use.

Response:

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John Previte
863-519-2676

Comments: (5-4-12)
1. **430-4.8(9) -** I think this phrase needs work:

> *9. A video record of the actual speed at which the camera is traveling ensuring that the rate of travel does not exceed that limit defined in 430-4.8.3 below.*

Response:

2. Is the speed of travel of the robot carrying the camera independent of the video speed (frequency or frames/per second)?

Response:

3. Do we want to say that the video is to playback at the same speed that the camera records? (no slow motion or accelerated re-play)

Response:

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Bill Sears
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Comments: (5-7-12)
Section 430-4.8.2 - What if reinspection is directed by the Engineer due to the travel speed of the camera, poor lighting, missing required data/information or because the pipe had water/silt in the bottom? Will this cost still be at the Departments expense? The answer is no but I think we need to add this language to assure the Contractors know it.

Response:

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Paul Harkins
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Comments: (5-8-12)

1. This language allows for the early inspection of pipe and that is a good thing, however, we need to address what is required as a final inspection and acceptance. We can see cracks, splits, determine if the pipe is over deflected, or has exposed gaskets and excessive joint gap early, but when do we inspect for damage that may be caused by others, etc. For example, guard rail posts driven into the pipe, crushed end treatments, pipe silted up. As a suggestion add language that indicated that a visual inspection is required (as in the old days) prior to final acceptance. If issues are found reinspect by video. In all circumstance document findings as well as remedial actions taken.

Response:

2. Might it be suggested that Section 125-8.1.3 be reviewed with regard to the statement which references heavy construction equipment over the culvert...specifically " to the finish grade" ? In your proposed change to Section 430 reference is made to when you have 3 feet of cover over the pipe what happens when you do not have tree feet of cover? Thus the need for a final final inspection of the pipe in the event damage occurred due to the shallow installation.

Response:

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Henry Smith
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Comments: (5-8-12)

1, The title of the section should have the word 'Final' removed. it provides a insinuation that the pipe is final accepted at that point. No part of the project is final accepted until all parts are accepted in accordance with Section 5-11.

Response:

2. There should be some language which requires that the pipe be clean (free of silting or debris) at the conclusion of the project, not just for the pipe inspection.

Response:

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Matthew Bare
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Comments: (5-31-12)

1. The Final Inspection specification should allow the contractor the discretion to conduct the inspection at any time between 3 feet of backfill and the stabilized subgrade. The Final Inspection specification should be more clear about when to inspect pipe that is outside the roadway embankment. For example, conduct the inspection at the finished grade, or natural grade. The Reinspection specification should define the criteria that the CEI will use to authorize any reinspections. If that is not feasibile, then the Reinspection requirement should simply define an area of the project (e.g., under paved areas, etc) that contractors will be required to re-inspect, rather that leave it open ended. The reference to Section 431-5 is confusing. It implies only one method of repair. The specification should refer to the Pipe Repair Matrix and should simply require video documentation of repairs.

Response:

2. What types of scenarios does the Department envision would warrant a reinspection per 430-4.8.2?

Response:

3. If the initial video inspection indicates damage, and the contractor makes a second video inspection to document the repair, is the Department also planning to require a Reinspection (third inspection) of that same line?

Response:

4. If the underground utility contractor conducts a final inspection at the stabilized subgrade, then will the CEI have authority to require that same contractor to reinspect at a point after the structural pavement or friction course?

Response:

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Douglas Holdener
Florida Concrete Pipe Institute
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Comments: (5-31-12)
We are looking forward to the opportunity that this specification will allow to resolve pipe inspection issues earlier in the project. We have the following comments that we see as an even further improvement to the proposed specification.

1. The Final Inspection specification should allow the contractor the discretion to conduct the inspection at any time between 3 feet of backfill and the stabilized subgrade.

Response:

2. The Final Inspection specification should be more clear about when to inspect pipe that is outside the roadway embankment. For example, conduct the inspection at the finished grade, or natural grade.

Response:

3. The Reinspection specification should define the criteria that the CEI will use to authorize any reinspections. If that is not feasibile, then the Reinspection requirement should simply define an area of the project (e.g., under paved areas, etc) that contractors will be required to re-inspect, rather that leave it open ended.

Response:

4. The reference to Section 431-5 is confusing. It implies only one method of repair. The specification should refer to the Pipe Repair Matrix and should simply require video documentation of repairs.

Response:

5. What types of scenarios does the Department envision would warrant a reinspection per 430-4.8.2?

Response:

6. If the initial video inspection indicates damage, and the contractor makes a second video inspection to document the repair, is the Department also planning to require a Reinspection (third inspection) of that same line?

Response:

7. Will the CEI have authority to require the contractor to reinspect at a point after the structural pavement or friction course?

Response:

8. When would the clock expire as to when the CEI would be allowed to authorize a reinspection?

Response:

9. If a CEI requires a Reinspection, and a possible defect or concern is found, but it is ultimately decided not to repair or replace the pipe, then who pays? The FDOT or Contractor?

Response:

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Jonathan Sickels
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Comments: (5-31-12)
Thank you for the opportunity to review and comment on the proposed specification change to Standard Specification Section 430 – Pipe Culverts.
ADS fully supports and recommends post installation inspection for all installed pipes to ensure the pipe will perform as designed. The changes to allow earlier pipe inspection will permit the contractor to assess and remediate construction issues prior to placement of asphalt or concrete pavement. In reviewing past inspection results, the department has seen inconsistent laser video pipe deflection inspection results. At the last PAG meeting the department presented plans to improve the accuracy and repeatability of laser video inspection testing. Specifically, the need was discussed to develop an operator certification program, develop field verification methodology for equipment calibration, and improve standards for third party certification of the equipment. It was reported that research is underway in conjunction with UF to qualify both equipment and operators to perform post-installation pipe inspections on FDOT projects. The proposed specification removes mandrel testing completely from the specification. Removal of the mandrel from the specification would preclude FDOT from using mandrels as a means of field checking the accuracy or calibration of lasers and as another method to evaluate installed pipes for acceptance if needed. While laser profiling and video inspection report has been the mechanism which the Department accepts or rejects pipe installation, it is premature to remove other viable methods from the specification until accuracy and repeatability concerns are resolved. It is our recommendation to keep the current requirements for the mandrel in the specification to be used if directed by the engineer. Thank you again for the opportunity to comment.

Response:

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Karen DeWitt
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Comments: (6-1-12)
The Underground Contractors Association of Florida met to review the comments and concerns submitted by the Florida Concrete Pipe Institute regarding proposed specification 4300202 Pipe Culverts. UCA Florida concurs and supports their input.

Response:

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