

## DISPUTES REVIEW BOARD RECOMMENDATION

18 February, 2008

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Ref: SR 202 (J. Turner Butler Blvd.), Financial Project ID: 209733-4-52-01: FAP No.: 4401003P: Contract No.: T-2202: Duval County: Disputes Review Board hearing regarding entitlement to additional compensation for unforeseen conditions related to pile driving operations and payment for test pile.

Dear Sirs:

The Florida Department of Transportation and J.B. Coxwell Contracting, Inc., (JBC), requested a hearing concerning the above referenced issue.

### **CONTRACTORS POSITION**

We will state the Contractors position by referencing, copying and paraphrasing their position paper and input from the hearing. Should the reader need additional information please see the complete position paper by the Contractor.

The Contractors position paper and rebuttal has the following statements and references to document their claim for entitlement.

Hal Jones Contractor, Inc. (HJC) installed the test piles and production piles at Hodges Boulevard Overpass and encountered an unforeseen condition during the installation of the first two test piles. The plans and specifications did not provide sufficient data for HJC to assume we would need to case the piles at this bridge structure. To the contrary, Drawing B5-5 clearly stated the procedure to follow in installing all concrete piles at this bridge structure. We followed our approved Pile Installation Plan with our auger and impact hammer operating flawlessly. We used our auger to preform pile holes 1-19 and 1-22 to Elevation +10 and set the piles without disruption to the sides of the hole. Our template was aligned properly. We proceeded to drive pile 1-

19 to refusal twice, with 8" of cushion material the first time and 5-1/4" of cushion material the second time. We set pile 1-22 which stopped at Elevation +21. We did not drive this pile, but set it down and contacted Parsons Brinckerhoff for further directions. We did not receive direction from Parsons Brinckerhoff or the Department. After some verbal conversations with Parsons Brinckerhoff, HJC furnished and installed casings for all remaining piles, including test pile (4-22). Pile 4-22 was designated as a test pile, instrumented as a test pile and a smart sensor used in the test pile. The Department paid for this pile as a production pile, even though data was achieved before and after the casing moved. Their position that the casing should have been removed before driving and is the sole responsibility of the Contractor contradicts Specification 455-5.1.1. For the Dispute Review Board's information, the casing for pile 4-22 moved after the tip of the pile was several feet below the bottom of the casing and moved with the pile until the pile driving was completed... This unforeseen condition has increased the overall costs due to no fault or negligence on the part of HJC.

HJC is seeking entitlement of our additional costs for the casing of seven (7) test and production piles (1-20, 1-21, 1-22, 4-19, 4-20, 4-21 and 4-22) and that test pile 4-22 be paid at the contract unit price for a test pile and not a production pile.

HJC respectfully requests entitlement and our costs as outlined in our letters dated November 6, 2007.

## **REBUTTAL**

In 455-10.2 it states that all equipment and procedures are subject to satisfactory field performance and to make any required changes that may result from unsatisfactory field performance. All of our equipment (crane, auger, impact hammer) ran flawlessly and satisfactorily. We do not believe casing is incidental to preforming or is covered in the test pile payment

In 455-12.4 it states that splices, build-ups, pile extractions and preformed pile holes are not paid for in test piles or are incidental in preforming holes for test piles or production piles. Again, we do not believe casing is "incidental" to preforming.

HJC was very responsive in addressing test pile 1-19. We offered several suggestions to P.B./Department, but in fact P.B./Department assumed a non-responsive role. This was not a means and methods issue, but an unforeseen condition.

HJC completely disagrees with the Department concerning pile 4-22. With the non-responsive position that P.B./Department took in this issue, we proceeded as specified in Section 455-5.1.1 which said "after driving the pile and obtaining Engineer's acceptance, remove the casing unless otherwise shown in the plans." With no direction by P.B./Department, we followed the specification.

## **DEPARTMENT'S POSITION**

We will state the Department's position by referencing, copying and paraphrasing their position paper and input from the hearing. Should the reader need additional information please see the complete position paper by the Department.

The Department's position paper and rebuttal has the following statements and references to document their claim for no entitlement to HJC.

As summarized in the FDOT letter dated 2 November 2007, the Department is adamant that, "the plans provided sufficient data for the Contractor to make informed decisions about the means and methods necessary to drive pile on this project. The test pile program is designed to allow the Contractor to demonstrate those means and methods while the Department confirms the minimum tip and capacity are achieved with an intact pile."

Within the content of the (a) FDOT letter, it should be noted that a concession was made to the Contractor (HJC) by allowing payment for piles 1-19 and 1-22 as full Test Piles.

Specifications Pertinent to Pile Operation: Within this section, both Predrilled and Preformed Pile Holes are defined. There is language within 455-5.1.1 which identify the potential use of casing. Also noted in this section (455-5.8) is a concise narrative which explains the Engineer's expectations for Penetration Requirements. Complimenting paragraph 455-5.8 is 455-5.10 which describes Bearing Requirements. The Department has maintained that these two requirements are the basis for acceptance in both the test pile and production pile programs.

Further to this section is the language used in paragraph 455-10.2 which identifies that installation modifications should be anticipated. Payment for all incidentals required to successfully complete the work is to be covered in the Test Pile Payment, Supplemental Specification 455-12.4.

Geotechnical Notes and Core Borings: Within this section exists the core borings which identify a casing has been used through the area under contest. Also shown is the pile data table which identifies the preformed elevation, the minimum tip elevation, and the bearing capacity.

Also noteworthy in this section is the fact that field conditions reflected accurately the soils identified and the water table levels on the Core Borings.

History: During this period, HJC advised the Department of their intent to claim for "Undisclosed Conditions" as well as request for labor and equipment compensation for the period they were not driving pile. It is the position of PB/Department that both of these documents have no merit. Further, HJC assumed a non-responsive role upon the failure of their initial effort to install pile. Their position to await direction from PB/Department to direct their means and methods before performing additional pile installation efforts was detrimental to the efficient completion of the Hodges Blvd. structure.

## **REBUTTAL**

Specification 455-5.1.1 identifies the use of casing when pre-drilling through material that caves.

The Pile Installation Plan is only accepted based on field performance and compliance with the specification requirements. It is not the role of the Department to dictate means and methods nor equipment type.

The Department maintains that pile 4-22 was installed in a manner different than that used for pile no. 1-22 and thus required a submittal and acceptance of a revised Pile Installation Plan. The Contractor's choice to remove the casing after the drive was never escalated to PB office staff for discussion. As an act of partnering, the Department provided payment for instrumentation of pile no. 4-22. Further, due to the changed procedure, an instrumented set-check on pile no. 4-22 was deemed necessary and this too was paid for by the Department. The Drive Log for this pile identifies movement of the casing beginning within the first two feet of driving and continuing throughout the drive operation.

The PB Inspector, Brian Dutilly, assigned to this operation has stated that he challenged the Contractor's Superintendent on proceeding with the drive without removing the casing. The Contractor's Superintendent responded that the casing could be removed after the pile was driven. The PB Inspector reminded the Superintendent that this procedure was not in accordance with the successful one followed at location 1-22.

In conclusion, the Department requests that the Contractor not be given any entitlement toward this issue. The plans provided sufficient data for the Contractor to make informed decisions regarding the method for pile installation.

## **FINDINGS OF FACT**

The Board's decisions are governed by the plans, specifications (standard, supplemental, technical, special), and the contract. Therefore our recommendations are based on the above referenced documents and the following facts.

### TEST PILE COMPENSATION

1. The contractor was required to drive two test piles at the Hodges Blvd. overpass. These piles were numbers 1-19 and 4-22. Pile 1-19 was driven without the casing being driven with the pile. Data was obtained from this pile. Pile 4-22 was driven with a casing being driven with the pile. The pile was driven from elevation +21 to elevation +17. At the hearing the contractor acknowledged that the casing went down 4 feet. The driving effort for 4-22 certainly seems different than the effort required for the 1-19 test pile.

Under the 455.5-12 Specification for test piles, section 455-5.12.3 states; *Use the same type, size, and weight hammer and equipment for driving test piles as intended for driving the permanent piles.* The manner that test pile 4-22 was driven was different than test pile 1-22. The contractor cannot guarantee that the production piles will have the casing be driven with the pile.

2. The plans, sheet B5-5, shows two test piles to be driven. The contractor was paid for two test piles which was the quantity that was in the bid documents. In addition to 1-19 test pile the contractor was paid for pile 1-22 as a test pile.
3. The contractor was compensated for the instrumentation of pile 4-22 and paid for the instrumented set check on 4-22.

### UNFORSEEN CONDITIONS

1. Plan note 5 on plan sheet B5-5 calls for preforming of the pile hole to the elevation specified.

2. Specification 455-5.1.1 states ...*For pre drilled holes which are required through material that caves during driving to the extent that the predrilled hole does not serve its intended purpose, case the hole from the embankment surface to the approximate elevation of the natural ground surface.* This specification speaks only to predrilled pile holes, not preformed.
3. Specification 455-5.1.1 provides dimensions for predrilled holes as 4 inches greater than the square dimension or 2 inches greater than the largest dimension across the pile cross-section. This criterion is not provided for the preformed holes.
4. Contractor did use his own casing for test piles and production piles. Contractor did pull casing and retain ownership.
5. Contractor did not encounter any unforeseen conditions when the casing was placed, pile set, casing removed and pile driven.
6. Deviation from the requirements in 455-5.1.1 which state *drive the pile then remove the casing*, the Department has the right to accept the product if it is in reasonable conformance with the contract documents. From the correspondence in the position papers and the hearing this methodology was acceptable to both parties.
7. There is no mention of casing needed or required in Specification 455-5.9 Preformed Pile Holes.
8. Specification 455-5.9.4 Construction Methods states...*Carefully form the preformed hole by using a drill or punch guided by a template or other suitable device, and do not exceed the minimum dimensions necessary to achieve the required penetration of the pile.* No mention of the need to case the hole as in the predrilled specification. No criteria for the minimum dimension of the pile hole except if grouting is required.

## **RECOMMENDATION**

The Board finds that the Contractor is not entitled to compensation for pile 4-22 as a test pile. The pile, 4-22, was not driven in the same manner as test pile 1-19. The contractor was paid for 2 test piles which is the number stated in the plans to be used as test piles.

The Board finds that there is entitlement to the contractor for the use of casing in the pile driving operation at Hodges Blvd. overpass. He is entitled to the cost of driving and removing the casing for the piles.

The Board sincerely appreciates the cooperation of all parties and the information presented for our review in making this recommendation.

The Board unanimously reached the recommendation and reminds the parties that it is only a recommendation. If the Board has not heard from either party within 15 days of receiving this recommendation, the recommendation will be considered accepted by both parties.

Submitted by the Disputes Review Board

Don Henderson, Chairman    Rammy Cone, Member    Jim MacLaughlin,  
Member

Signed for and with concurrence of all members

Don Henderson, PE