

# DISPUTE REVIEW BOARD DECISION

May 2, 2000

Mr. William R. Adams, III, P.E.  
Senior Project Engineer  
Parsons Brinckerhoff  
25134 Campground Road  
Land O'Lakes, Florida, 34639

Mr. Sam Todd  
Project Manager  
Archer-Western Contractors, Ltd.  
25133 Campground Road  
Land O'Lakes, Florida 34639

**RE: F.P.ID: 258734-1-52-01, 256350-1-52-01, 256350-1-56-01.  
SPN: 14140-3415, 14091-3501, 14091-6503  
Contract No. 20445  
County: Pasco  
State Road 93(I-75) & State Road 56**

**SUBJECT: Dispute Review Board Issue No. 1  
Entitlement for Down Time Associated with Pile Splices.**

Dear Sirs:

By letter dated March 23, 2000 the contractor, Archer-Western Contractors, Ltd. (AW), and the Florida Department of Transportation through its agent, Parsons Brinckerhoff (PB), requested the Disputes Review Board (DRB) for this project conduct a hearing to determine entitlement for AW's claim for down time associated with necessary pile splices. The hearing was convened at 10:00AM April 20, 2000.

Written position statements and technical papers were presented the DRB prior to the hearing with oral presentations by both parties during the hearing.

The DRB was requested to determine "ENTITLEMENT" for this issue. Should entitlement in favor of the contractor be determined, the parties would negotiate time and value.

## **ISSUE:**

### **AW:**

*"Non critical construction delay caused by unforeseen conditions encountered during pile driving operations at the Trout Creek and Cabbage Swamp Bridges . Archer-Western Contractors believes this delay to be compensable and the responsibility of the Department as "owner".*

### **PB:**

*"The contractor, Archer-Western, has claimed entitlement to compensation for cost incurred as a result of the down time their pile driving crew experienced, while waiting on pile build-ups to be manufactured and delivered to the project. It is the Departments understanding, that*

*Archer-Western believes the cost of their crew's down time is not specifically covered under any of the existing pay items in this contract".*

### **Background on the Issue:**

During the construction of pile foundations at the bridges for Trout Creek and Cabbage Swamp several of the piling were driven to cutoff elevation not achieving the required bearing capacity. After set checking the piling and not achieving design bearing capacity, PB directed AW to provide build-ups for these piling. The build-ups would be driven to specified bearing and could be furnished utilizing cut-off piling from this project, or purchasing new prestressed or precast build-up sections. AW elected to order new build-up sections requiring two to three weeks to manufacture.

### **Positions:**

#### **AW:**

*"Archer-Western Contractors request an equitable adjustment to the contract in light of the circumstance in which the aforementioned work resulted in an unforeseen condition and caused a non-critical delay in the installation of the foundation piles at Trout Creek and Cabbage Swamp bridges. We are seeking compensation only for the rental cost of our equipment during the delay period. We are not seeking compensation for the direct work (we are satisfied the pay item compensated us for our effort) or any labor cost, as we were able to utilize the crew to perform other task during the delay period. Our request is based on the following (in part).*

- 1. The Department authorized the length of piles to be fabricated and used in the bridge foundations. The Department makes their determination by analyzing the data generated as a result of the test pile program performed at both bridge sites. Etc.,etc.*
- 2. As required by the contract, Archer-Western Contractors did perform the test pile program at both Trout Creek and Cabbage Swamp Bridges. The Department, not the contractor, authorizes the pile lengths to be installed at each site. We believe that by exercising this authority and including a pay item for splicing, the Department assumes responsibility for all insufficiencies resulting from their direction or determination. Etc.,etc.*
- 3. The pile lengths as prescribed did not embed in suitable lime rock at the elevation anticipated by the Departments subsequent to analyzing the data from the test pile program. Etc.,etc.*
- 4. The contract does contain language that allows the contractor to install longer than authorized lengths of piles to suit their installation method. Any length longer than authorized above cut off elevation is not compensable. Etc.,etc.*
- 5. Etc.,etc.,An unforeseen condition is an intrinsic component of any "Differing site condition". The direct cost to perform the splice is covered by the pay item, however should the need to splice a pile produce a delay, it is clearly compensable under because it is an unforeseen condition not anticipated by either party. Etc.,etc.*
- 6. The fact that neither party anticipated a delay due to splicing piles is evident in our approved CPM schedule. Etc.,etc.*

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7. *We concede that splice piling is inherent to the work as provided in the contract, however we do not believe the associated delay, which affected our operations as experienced, is common. Etc.,etc.*
8. *The pay item 455 17 2 Pile Splices (18") in the contract has a quantity of 32 each. The description in the contract clearly indicates that payment for splicing is made under this pay item but no mention of any associated delay resulting from such activity.*
9. *The contract documents do not include any exculpatory language that discharges the responsibility of a non-critical delay from the Department. Etc.,etc.*
10. *In accordance with the contract documents, specifically Section 5-12 "Claims by Contractor" and Section 4.3-4 "Differing Site Conditions" of the standard specifications, Archer Western Contractors notified the agents, etc.,etc."*

**PB:**

*"Contrary to Archer-Western's claim as stated above, the Department contends that the existing contract pay items do in fact, cover all of the Contractor's cost associated with the installation of the piling, including the manufacture, splicing and driving of build-ups".*

*First, paragraph 9-2.1 of the 1991 Standard Specifications states in part "The Contractor shall accept the compensation as provided in the contract as full payment for furnishing all materials and for performing all work contemplated and embraced under the contract; also for all loss or damage arising out of the nature of the work or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its final acceptance; also for all other cost incurred under the provisions of Division I of these specifications.*

*For any item of work contained in the proposal, except as might be specifically provided otherwise in the basis of payment clause for the item, the contract unit price (or lump sum price) for the pay item or items shall include all labor, equipment, materials, tools, and incidentals required for the complete item of work, including all requirements of the section specifying such item of work, except as specifically excluded from payments".*

*This contract specifically includes pay items 455-3-2 (18" Prestressed Concrete Piling Furnished), 455-4-2 (18" Prestressed Concrete Piling Driven), 455-140-12 (18" Test Piles Driven), and 455-17-2 (18" Pile Splices).*

*Paragraph A455-9.2.3-Build-ups, states (in part) "The lengths of pile build-ups authorized by the Engineer, etc., etc."*

*Paragraph A455-9.2.8 Driving of Splice, states (in part) "If a pile is driven below cut-off and satisfactory bearing is not obtained, and additional driving is required after construction of a satisfactory splice; the Contractor shall be paid an additional quantity of 10 feet of piling furnished. This compensation for driving of the splice, however, will not be allowed for test piles which are spliced and redriven."*

*piles which are spliced and redriven."*

*Paragraph A455-9.9 Pile Splices states (in part) "Authorized splices in concrete piling, steel piling and test piling, which are made for the purpose of obtaining greater lengths than originally authorized by the Engineer, etc.,etc."*

*Paragraph A455-10.13 Pile Splices states (in part) "The quality of this item shall be determined as provided in A455-9.9. Etc.,etc."*

*With regard to the paragraph 9-2.1, the Contract did contemplate and embrace the installation of piling and did contemplate and embrace the necessity of pile splices. Therefore, in keeping with paragraph 9-2.1, Archer-Western must accept payment under the existing contract pay items as full and final compensation for furnishing and installing the necessary build-ups.*

## **FINDINGS:**

Section 455-Piling in the Standard Specifications for Road and Bridge Construction 1991 was deleted and rewritten in the Supplement Specifications to the 1991 Standard Specifications for Road and Bridge Construction 1994. The 1994 revision was deleted by the Special Provisions for this project. All references in these findings concerning piling will be to Section 455 in the Special Provisions.

### ***A455-1 Description (in part):***

***The work specified in this Subsection consist of all work necessary to furnish and install piling including driving, jetting, preformed pile holes, cutting off, splicing, dynamic load testing and static load testing of piling.***

### ***A455-3.11 Bearing Requirements (in part):***

***A455-3.11.1 General: Piles shall be driven to provide the bearing capacities required for carrying loads shown in the plans. For all types bearing piles, the driving resistance (as determined by methods described herein) sufficient for carrying specified loads shall be considered as the minimum bearing which shall be accepted for any type piles.***

***A455-3.11.6 Piles with Insufficient Bearing: In the case that the safe bearing capacity of any pile is determined to be less than the required bearing capacity, the pile may be spliced and driving continued, or may be extracted and a pile of greater length driven, or, if so ordered by the Engineer, additional piles shall be driven until the adjusted required bearing per pile is reduced to the determined bearing capacity of the piles already driven.***

***A455-3.13.1 Description (in Part): Test piles which have been driven their full length and have developed only minimal required bearing shall be built-up and further driving shall proceed until satisfactory results have been obtained.***

### ***A455-3.16 Pile Lengths:***

***A455-3.16.1 Test Pile Lengths: The length of test piles shall be as shown in the plans or as directed by the Engineer.***

***A455-3.16.2 Production Pile Length: When shown in the plans, the lengths are based on information available during design and are approximate only. Final pile lengths will be determined in the field and may vary significantly from the lengths or quantities shown in the plans.***

**A455-3.16.3 Authorized Pile Lengths (in part):** *The authorized pile lengths are the lengths determined by the Engineer based on all information available before the driving of the permanent piles including but not limited to information gained from the driving of test piles, dynamic load testing, static load testing, set-checks, pile redrives, supplemental soil testing, etc. These lengths shall represent the lengths which are assumed to remain in the completed structure.*

**A455-5 Prestressed Concrete Piling (in part):**

**A455-5.7 Extensions and Buildups (in part):**

**A455-5.7.2 Extensions to be Driven or Those Five Feet or Longer (in part):**

- (a)** *The spliced section shall be cast in accordance with Section 450 with the dowel steel in the correct position and alignment or the Contractor shall provide a cut-off pile section of the same cross-section, mix design and minimum strength to be used as a spliced section in accordance with A455-9.2.6. If the splice is to be driven, the cut-off pile sections shall include the head of the cut-off pile installed on the original pile in its required position.*
- (f)** *When cut-off pile sections are used for splices, the spliced sections shall, etc.,etc.*

**A455-9.2 Prestressed Concrete Piling (in part):**

**A455-9.2.6 Use of Cut-offs as Build-ups:** *Cut-off sections in good condition and approved by the Engineer may be spliced to driven piles with epoxy bonded splices and used as build-ups, or they may be re-driven in the position of permanent piles as directed by the Engineer. The length of cut-off sections used as build-ups, measured from the top of the original pile elevation of cut-off, shall be included for payment as Piling Driven, unless the cut-off section is transported to another bridge site under the same contract and used as a build-up, in which case it will be paid for at 30% of the furnished price and 100% of the driven price. No additional payment for Piling Furnished will be made if used at the same bridge site.*

**A455-9.2.7 Use of Cut-offs as Permanent Piles (in part):** *Pile cut-offs which meet specification requirements and are to be driven as permanent piles shall be paid for as follows: If the cut-off section is to be driven in the same bridge (or adjacent bridge of a dual bridge) length of piling shall be paid for only as piling driven. If the section of piling is taken from another bridge in the same contract, it shall be paid for at 30% of the contract price for Piling Furnished and 100% of the price for Piling Driven.*

**Sheet 1A of the plans (Summary of Pay Items)** *estimated 5 pile splices (18") in the West bound bridge at Trout Creek, 6 pile splices (18") in the East bound bridge at Trout Creek, 3 pile splices (18") in the West bound bridge at Cabbage Swamp, and 3 pile splices (18") in the East bound bridge at Cabbage Swamp. Total estimated pile splices for these 4 Bridges: (17).*

**The Field Pile Driving Records** *show 3 pile splices (18") in the West bound bridge at Trout Creek, 7 pile splices (18") in the East bound bridge at Trout Creek, 2 pile splices (18") in the West bound bridge at Cabbage Swamp, and 1 pile splice (18") in the East bound bridge at Cabbage Swamp. Total pile splices constructed for these 4 Bridges: (13).*

## **THE BOARD FINDS:**

The Special Provisions and Plans clearly indicate that Pile Splicing would be required on this project. The soil borings shown in the plans indicate the geological variability that could be anticipated during the construction of driving piling on this project. The Special Provisions were very specific that pile cut-offs could be utilized as Build-ups in the event pile splices were necessary and the method of payment for this work.

The Contractor acknowledged during the hearing the Department ordered the splices in a timely manner, when it became apparent the authorized lengths of piling would not take-up without being driven below cut-off.

The number of splices and anticipated length of build-ups could not be reasonably determined prior to driving production piles.

The number of splices required did not exceed the plan quantity for the four bridges. "The non-critical delay was exculpatory" by the chance sequencing of the driving operations since most of the piling requiring splices were driven toward the end of the pile driving operation.

**THEREFORE THE BOARDS RECOMMENDS:**

Based on the information presented at the hearing and reviewing contract documents, the Board finds the plans and specifications were very clear the Contractor had alternate methods and sources in providing Build-ups to obtain design bearing for the piling greater than Plan Length.

There were available to the contractor cut-offs from other piling on this project that could have prevented / mitigated the delay experienced by ordering new piling to be cast for the build-ups.

Based on the information reviewed the Board finds the Contractor, Archer-Western is **NOT** entitled to compensation for the delays associated with furnishing Build-ups for splices used in constructing piling at the four (4) described bridges.

Submitted by the Dispute Review Board for F.P.ID 258734-1-52-01, etc.  
Issue No. 1 Down Time Cost Associated with Pile Splices.

E.K. Richardson-Chairman, John H. Duke-Member, John W. Nutbrown, Member.

**SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:**

A handwritten signature in black ink, appearing to read "E.K. Richardson", written over a horizontal line.

E.K. Richardson, Chairman