

February 20, 1997

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Florida Department of Transportation
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Mr. Joseph M. Duffy
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RE: State Job No. 58002-3449
W.P.I. No. 314-8543
Contract # E3720
Santa Rosa County
I-10 Bridge Replacement Over Blackwater Bay
Disputes Review Board

Subject: Disputes Review Board - Issue # 1
Finding of Fact Pertaining to Claim # 1 - West Embankment Global Stability Issue.

On January 23, 1997, at the request of the Contractor, Traylor Bros., Inc. (Traylor), and the Florida Department of Transportation (FDOT), the Disputes Review Board (DRB) held a hearing to consider the dispute over entitlement to additional compensation for extra work that has occurred as a result of "unforeseen conditions" at the West embankment of the new Westbound Bridge.

Written documentation was furnished to the Board by each of the parties. This documentation included:

Traylor's submittal of its position dated January 06, 1997.

Post, Buckley, Schuh & Jernigan, Inc.'s (PBS&J) submittal dated January 7, 1996 outlining and supporting the FDOT's position.

Plans and specifications had been previously provided to members of the Board.

Oral presentations were made to the Board by both parties at the hearing.

Additional information requested by the Board or independently furnished by the parties included:

Professional Service Industries, Inc.'s (PSI) "Geotechnical Investigation" dated September 07, 1993.

Schmertmann & Crapps, Inc. - "Blackwater River I-10 Bridge Estimated Settlements from Traffic Vibrations & Pile Driving" Report dated Editorial Changes October 11, 1995.

Emergency Funds Request for Replacement of Interstate Highway 10, Bridges over Blackwater River Santa Rosa County, Florida (Not dated).

Soils and Foundations Manual (Effective May 1, 1996, FDOT).

Federal Highway Administration Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Plans and Specifications.

Copy of Contract and individual reviewer scores.

Schmertmann & Crapps, Inc. Fax Transmittal dated November 12, 1995

Report Documentation, West Embankment, Sheetting Recommendations for Finley McNary Engineers, Inc. by Schmertmann & Crapps, Inc. dated April 23 1996.

On February 3, 1997, FDOT requested that it be allowed to have the District 3 Geotechnical Engineer discuss and respond to questions posed and not fully answered during the hearing. In the interest of a full and complete hearing, the DRB allowed the FDOT its request, with the understanding that Traylor would be allowed additional time for rebuttal if they felt it necessary.

On February 18, 1997, the hearing was reconvened in conjunction with the regular construction progress meeting at the jobsite.

ISSUE:

The Contractor requests that the DRB find entitlement for Traylor Bros./Finley McNary for additional time and money due to unforeseen geotechnical conditions encountered on the project.

The FDOT does not agree that there is cause for additional compensation for subsurface conditions at the West Embankment.

Both parties requested that should entitlement be established and acknowledged, the DRB not rule as to the quantum of such entitlement at this time and the parties would attempt to negotiate the value of entitlement.

The Contractor supported his position with the following:

- 1. The emergency replacement of the Blackwater Bridges is a time incentive contract to replace structures that were in danger of collapse. **To competitively bid a time dependent structure in the extremely short period of less than 26 days, an assumption of the accuracy of the FDOT supplied data, and the willingness of the FDOT to fairly compensate a contractor for taking on a project of this magnitude had to be made. Excessive contingencies would preclude a contractor/design team from being competitive.***
- 2. The inclusion of a disputes review board and provision for "Partnering" allay the fears that come with a high risk situations. Trust that the clients interest are the same as ours, the goal being to provide a long term, soundly engineered structure replacing one that was in danger of falling down was implicit in the contract and the pre-job verbiage.*
- 3. We ask only for compensation for the conditions that could not have been rationaly expected at bid time.*
- 4. The information provided by the FDOT and available to Traylor Bros./Finley McNary did not address the unforeseen geotechnical conditions discovered later during construction. The project documentation provided to The Traylor Design/Build Team **did not identify the magnitude, extent or location of the underlying, highly compressible varying clay layer.** The FDOT project required that the new WB Bridge be located at the northern limits of the right-of-way to minimize the potential for vibration induced settlement of the existing bridge. No boring information was available at the time the proposals were submitted, and the FDOT stated that the Design/Build Team should rely on the existing documentation provided. Traylor Bros./Finley McNary was instructed by the FDOT to base our technical proposal and bid on the documentation provided.*
- 5. **The existing embankment for the EB and WB has a global stability problem and does not meet the FDOT guidelines.** Traylor Bros./Finley McNary was instructed by the FDOT to*

- This pre-existing condition was not identified to the Design/Build Teams. This condition further complicates the situation noted above and required additional work to correct it. Existing global instability problems with the embankments was not disclosed to the Design/Build Teams and significantly contributed to the problems
6. **All four Design/Build Teams assessed the available data in a consistent manner. The approach to the bridge length, alignment and embankment was very similar.**
 7. **Traylor Bros./Finley McNary had identified the unforeseen conditions early in the project and have continually worked together in preparing an acceptable technical conclusion.**
 8. **The PSI/Jammal borings were taken several years ago when a bridge widening scheme was being developed. A total of 46 borings were taken, but only two borings were taken in the embankment material on the West side. Boring TB-46 was taken in the West Embankment on the Baseline of Survey, and Boring TB-1 was taken at the toe of slope just North of the Existing Westbound bridge on the West Embankment. Boring TB-1 is the closest boring to the proposed MSE Wall. Boring TB-1 shows 3 or 4 ft. of loose silty material, followed by silty sands and sand of fairly good consistency. No clay is evident in this boring. ... On page 8, in a discussion of negative skin friction (downdrag), the report briefly mentions widening of the existing embankments. With minor widening, they would expect no significant settlement. If significant fill, they would have to re-evaluate.**
 9. **This memorandum from Schmertmann & Crapps, Inc. was received late in the afternoon, the day before the Technical Proposals were due. It came too late to make any significant reevaluations; no specific problems were identified or actions to be taken provided. All responsibilities were left to the Contractor for interpretation and no new data presented. We interpreted this memorandum as an attempt by Schmertmann & Crapps to limit their exposure, should some bad soils conditions be encountered.**
 10. **It should be noted that the relationship of Schmertmann & Crapps with the Design/Build Teams and the FDOT during this period was very confusing. Schmertmann & Crapps, during the time this memorandum was issued was not committed exclusively to any one Design/Build Team and may have still been under contract with the FDOT. The FDOT was strongly urging that their involvement be required and they were included on all four (4) Design/Build Teams.**
 11. **Schmertmann & Crapps was not involved in the conceptual design of the embankments or MSE walls: however, the layouts were provided to them prior to the noted memorandum. Since they were actively involved with the other Teams, we were careful not to discuss the issues or details of our proposal too openly that could be used by the other Teams. Not having the benefit of direct interaction with an exclusive geotechnical engineer during the pre-bid was a shared disadvantage of all Teams and was a result of FDOT District III's insistence that Schmertmann & Crapps be used.**
 12. **Contingencies were provided for excessive overtime and potential of muck identified by the November 12, 1995, letter from Dr. Crapps. We believed at bid time, that the abutments were buildable without heroic measures.**

The **FDOT** supported its **position** with the following:

1. **This is a design build project. The associated contract is different than a normal FDOT contract. Contractual language is contained in this project that places the responsibility of design and construction on the Contractor. Language also exists in this contract that requires the bidder to investigate the amount of engineering and geotechnical services that will be required in order to familiarize himself with the total scope of work. The contract deletes differing site conditions. The only items excluded from this deletion were defined in the contract. These items were piling, pile holes, and bridge jacking.**

from this deletion were defined in the contract. These items were piling, pile holes, and bridge jacking.

2. **During the evaluation of this claim a letter dated 11-12-95¹ warned the bidders of weak soils on the existing borings. The letter also suggests possible ways to approach the project if the weak soils were found in the embankment area. The contractor indicated that the weak soil issue was omitted from his proposal. He also indicated that the area in question was beyond the boundaries described in the pre-bid documentation. Liability questions were asked in the pre-bid meetings, and only catastrophic events would be considered by the Department. (Hurricanes, barge collisions).**
3. **The contractor indicated that this unforeseen / foreseen condition was omitted from his proposal; consequently the contract addresses omissions. Resolution of omissions is to be made by the contractor's engineer at no additional cost to the Department. Based on this information the claim is denied.**
4. **The utilization and interpretation of the information provided was left up to each company submitting a bid. Review of the data indicated that additional soil information would be needed for design. This observation is based on the warnings made in the Schmertmann & Crapps report, the PSI report, and the preliminary borings.**
5. **Design Build Team has total responsibility for design and construction.**
6. **The cost of risk is part of the Design Build Process.**
7. **The lump sum bid is intended to be the total and final cost of the completed project.**
8. **Differing site conditions have not occurred. All information provided by the Department relative to soil conditions is correct.**
9. **The contract does not allow for additional compensation for differing site conditions or for unforeseen conditions.**

THE APPLICABLE CONTRACT AND SPECIFICATION REFERENCES ARE LISTED IN ATTACHMENT 1.

PERTINENT EXCERPTS FROM FURNISHED DOCUMENTS FOLLOW:

PROFESSIONAL SERVICE INDUSTRIES, INC.'s - "GEOTECHNICAL INVESTIGATION" DATED SEPTEMBER 07, 1993.

"This report addresses the foundation considerations at the bridge only. Other roadway and culvert related issues will be discussed under a separate cover."²
(Emphasis Added)

"Of major importance on this project was the on-going settlement of parts of the existing bridge structure."³

"Considering the existing embankment fills have been placed for 25 years, we are of the opinion that minor widening of existing embankments will not induce significant settlement of the underlying soils. ...If significant filling at the abutments is planned, we will need to evaluate downdrag forces."⁴

¹ This refers to the Schmertmann & Crapps, Inc. fax transmittal.

² Page 1 paragraph 1. These issues were never addressed.

³ Page 2, middle of the page.

⁴ Page 8, bottom of the page.

SCHMERTMANN & CRAPPS, INC. – “BLACKWATER RIVER I-10 BRIDGE ESTIMATED SETTLEMENTS FROM TRAFFIC VIBRATIONS & PILE DRIVING” REPORT DATED EDITORIAL CHANGES OCTOBER 11, 1995.

“The objective of this study was to estimate the effects of driving piles for support of the work bridge and the new bridge upon the existing bridge foundations. The primary concern is settlement of the existing bridge. The available soils data is limited to SPT borings. A limited amount of supplemental soils work was obtained during this study (CPT and DMT soundings at the approach ends of the bridge adjacent to existing SPT borings).”⁵

EMERGENCY FUNDS REQUEST FOR REPLACEMENT OF INTERSTATE HIGHWAY 10, BRIDGES OVER BLACKWATER RIVER SANTA ROSA COUNTY, FLORIDA (Not dated).

“Emergency funds are hereby requested for the replacement of a structure with questionable stability which transports Interstate Highway 10 traffic over the Blackwater River in Santa Rosa County, Florida.

Unacceptable settlements of the substructure have progressed since 1973. Corrective action has included jacking of the superstructure back to grade. Bridge Maintenance Work Orders and the Inspection Report Updates indicates that the substructures at five locations have settled and the superstructures at these locations have been raised back to the design grade by jacking and shimming or grouting the beam bearings. The amount of jacking required has varied between 1 to 2 inches.

SUMMARY OF LIKELY CAUSES OF EXISTING SETTLEMENT. (S&C, July 1995, Pg. 38)

Our study of the field data indicates the following (but not without ambiguity):

- 1. Approximately 48% of the piers and bents have experienced settlements exceeding 1”.*
- 2. Traffic vibrations, negative skin friction, low initial pile driving resistance, and scour have all had a part, but a minor one, in producing the p/b settlements.*
- 3. The settlement problem lies with the weak soils below the tips, most likely thin and randomly located organic layers.*
- 4. The above 3. should be checked by appropriate soil exploration during the design phase for the new bridges. If true, the new piles should bypass all such layers.*
- 5. The vibrations from using 120,000 ft-lb hammers will be more severe than those produced by traffic. Our analyses (Section 9) indicate important settlement and distance limitations. Checking this should be part of the above test program.”*

⁵ Page 1 INTRODUCTION middle of page.

**SCHMERTMANN & CRAPPS, INC. FAX TRANSMITTAL DATED
NOVEMBER 12, 1995.⁶**

"The concerns expressed in this transmittal have been raised during review of the embankments and walls.

Blackwater Bridge High Embankments & Walls

Some of the embankments and walls shown for the new bridges are high. Unfortunately we will not have any soils information in the area of the new embankments and walls at the ends of the new bridges until we perform our field investigations. The existing borings show that the soils in some locations are very weak. Weak soils will have considerable settlement potential and will not support rapid fill placement without failure.

It was common construction practice at the time that the existing bridges were constructed to remove muck from the area of the embankment construction and cast it to the side on the right of way or off the right of way (with permission of the adjacent property owners). On some projects, excavated muck was used to flatten the slopes. Therefore, there is a chance that muck may be encountered in the area of the walls and embankments.

If muck is encountered, it would be best to remove the muck and replace it with suitable soils. If deeper soft clays are encountered, it will likely be necessary to construct the MSE walls and embankment fill in stages allowing the soils to consolidate and gain strength. Wick drains could be used to speed the consolidation process. Embankment instrumentation may also be required. Also please note that special fill materials (generally noncorrosive materials) are required for construction of embankments behind MSE walls. New fill materials may be selected to meet the necessary requirements. However, the tie backs will likely extend into the existing fills which may not have the required properties.

In summary, there are a lot of uncertainties in the costs related to construction of the walls and embankments. Other options available include eliminating the high walls and embankments by extending the bridge(s) or using pile supported pavement which will be expensive but likely more certain in terms of cost. Pile supported walls may be an option.

We do not know the position the Department will take in the event that poor soil conditions are encountered for the embankments and walls. Unfortunately, we do not have the answers to solve this potential problem. However, we believe that the Design/Build Team should address the potential risks and consider them in the cost proposal.

CONCLUSION:

It has not been disputed that this project was "let" on an emergency fast track basis as a Design/Build Project due to the differential settlements experienced in the past. Present day vibration levels indicated the need for additional remedial measures, significant scour had occurred at the bridge site, recent storms had a measurable impact on the Blackwater Bridge site. "Loss of this bridge would be catastrophic."

Under this emergency circumstances the project solicitation and award was conducted in a compressed time period.

The Invitation to Bid was issued to selected contractors October 20, 1995.

⁶ The fax time stamp on this transmittal indicates that it was sent on Sunday at 4:37 p.m. The Technical proposals were due at 10:00 a.m. on the following day. Traylor stated that they had no previous communication with Schmertmann & Crapps, Inc. in regard to the issues contained therein.

A mandatory Pre-bid conference was held October 27, 1995.

Final Scope was issued October 30, 1995.

Technical proposals were received November 13, 1995.

Public Bid Proposals received by FDOT November 17, 1995.

PS&E process November 20, 1995.

Contract Award November 22, 1995.

The **normal time** for a Design/Build project from **advertisement** to **bid** would be from **60 to 90 days** depending upon the complexity of the project.

Traylor submitted its Technical Proposal on November 13, 1995. Section 2.2 of this document outlined their approach and understanding of the project. On page 18 of this section Traylor **spelled out the scope of their proposed use of MES walls:**

Precast Seawall and Mechanically Stabilized Earth Walls

Based on the proposed alignment of the new east and westbound bridges, there is a need for a new seawall and MSE wall construction. The new westbound bridge requires that the embankment be extended north, while the project constraints dictate that we remain within the existing right-of-way. In addition the proposed PGL's are approximately 10 feet higher on the west approach, and 6 feet higher on the east approach to the bridges than the current PGL's.

To obtain the proposed alignment on the westbound approach we intend to construct approximately 300 feet of MSE wall along the north right-of-way line to retain the proposed embankment. The maximum height of this wall will be approximately 27 feet tapering off to approximately 6 feet in height downstream.

...
Currently, a prestressed precast seawall wraps around the east and westbound bridge abutments of the east approach to the bridge. This wall is slated for removal and replacement with a new seawall of similar construction, but greater length and height. We have determined that the new wall should extend to an elevation of 10.5 feet NGVD to the top out over the maximum recorded highwater. It will wrap around the east and westbound abutments and parallel the north right-of-way line for a distance of approximately 150 feet. A short MSE wall similar to the wall in the west approach will be constructed along the face of the east bridge abutments. The height of this wall is estimated to be approximately 5'-0", and it is set back from the seawall approximately 7 feet. The installation of these walls does not present any significant design or construction problems.

Plans included with this Technical Proposal further detail the location and characteristics of this MSE wall.

At no time after receipt of the Contractor's technical proposal, the Department's evaluation of that proposal or subsequent receipt of bid did the Department question the planned method or manner proposed by Traylor to construct the endbents.

All known information was to be provided the Contractor for proposal preparation, yet no existing roadway information on the West approach was provided. This is an important issue, especially since the existing embankment had been surcharged during the original construction. Nor did the documents provided the Contractor indicate that the existing endbent embankment did not meet existing specification factor of safety requirements.

The project was presented as an emergency situation with imminent bridge failure, and all past studies and concentration were focused on the structure.

Due to the timing of the Schmertmann & Crapps memo, the wording contained therein and the "shared disadvantage" of not having an exclusive geotechnical engineer, the Board feels that the Contractor made a reasonable interpretation of its import. It is also somewhat troubling that this surfaced at the "eleventh" hour, and the information contained therein was not communicated to
"shared disadvantage" of not having an exclusive geotechnical engineer, the Board feels that the

the FDOT by Schmertmann & Crapps, Inc. Had this document come from the department in a timely manner, along with instructions as to the risk that the Department wished the Contractor to assume, an entirely different interpretation would have been appropriate.

Due to the short bid preparation period, the Contractor was not afforded the time and access to adequately investigate the site, but was forced to rely to a degree that is not normal, for a Design/Build Project, on the representations of the FDOT. He prudently interpreted those representations and communicated his scope to the Department. The conditions encountered were so different from what could possibly be anticipated that they were not within the contemplation of the Department or the Design/Build Team. However, after construction began, the Contractor had full access to the site to perform any and all necessary investigation and evaluation.

The **Disputes Review Board**, therefore, **finds that Traylor Bros./Finley McNary is entitled to additional compensation** for extra work due to unanticipated and unforeseen site conditions. However, the Board feels that there are definite limits to the scope of the entitlement and believes an attempt should be made by the Department and Contractor to negotiate those boundaries.

Should such negotiations prove unfruitful, the Board would be prepared to rule as to the limits of justified entitlement.

I certify that I participated in all of the meetings of the DRB regarding the Dispute indicated above and concur with the findings and recommendations.

Blackwater River Bridge Replacement - Disputes Review Board

John H. Duke
Chairman

L. G. Wilkinson, Jr.
Member

Jim D. Vest
Member

CC: Phenix Palmer
Don Davis
Julian McCreary

THE APPLICABLE CONTRACT AND SPECIFICATION REFERENCES ARE LISTED BELOW:

Attachment "A" - PROJECT CONCEPT AND SCOPE OF WORK

Section I. PURPOSE

MISCELLANEOUS INFORMATION

For the design of this project, the Department shall provide:

1. Existing Right of Way Maps
2. Bridge Inspection Reports
3. Existing Bridge and Roadway⁷ Plans
4. ADT Traffic Projections
5. Schmertmann & Crapps Report on Estimated Settlements From Traffic Vibrations and Pile Driving

Section VIII. PROJECT REQUIREMENTS AND PROVISIONS FOR WORK

A. Governing Regulations

The services performed by the CONTRACTOR shall be in compliance with all applicable DEPARTMENT Manuals and Guidelines. The DEPARTMENT'S Manuals and Guidelines incorporate by requirement or reference all applicable State and Federal regulations. The current edition, including updates, of the following DEPARTMENT Manuals and Guidelines shall be used in the performance of this work. It shall be the CONTRACTOR'S responsibility to acquire and utilize the necessary DEPARTMENT manuals that apply to the design work required to complete this project.

1. Roadway Plans Preparation Manual
2. Florida Department of Transportation Roadway Traffic and Design Standards
3. Florida Department of Transportation Location Survey Manual
4. Florida Department of Transportation EFB User Guide (Electronic Field Book)
5. Florida Department of Transportation Drainage Manual
6. Florida Department of Transportation Soils and Foundations Manual
7. Florida Department of Transportation Structures Design Guidelines
8. Florida Department of Transportation Computer Aided Design and Drafting (CADD) Roadway Standards Manual
9. Florida Department of Transportation Roadway CADD Handbook
10. Florida Department of Transportation Traffic Control and Safe Practices Manual
11. AASHTO
12. MUTCD

⁷ These were never furnished for the West abutment.

12. MUTCD

13. Elders Road User Program
14. American Disabilities Act

...

Attachment "B" – CRITERIA FOR CONTRACTOR PREPARED DESIGN

3. SPECIAL CONDITIONS

The existing dual bridges are founded on piles in or above compressible soils which are causing the bridge to settle. A geotechnical report, by Schmertmann and Crapps, addressing the settlement of the existing bridges is part of the information package for this project. Extensive settlement could result in structural failure.

Attachment "C"

1.0 PURPOSE

This attachment sets forth the information which the Contractor must include in his Technical Proposal for the project. Note, the Proposed Construction Time is not to be included in the Technical Proposal.

2.0 TECHNICAL PROPOSAL REQUIREMENTS

2.1 General

Each Firm being considered for this project is required to submit a Technical Proposal. The **proposal shall include sufficient information to enable the Department to evaluate the capability of the Firm to provide the desired services.** ...

...

2.2 Approach and Understanding of the Project

The Contractor shall present a plan for completing the specified work. The efficient use of manpower and materials shall be considered.

2.7 Submittal Requirements

...

Preliminary design plans included with the Technical Proposal shall include the following minimum information:

- a. General plan and elevation showing the following:
 - Project limits
 - Horizontal alignment
 - Pier and abutment locations
 - Span lengths
 - Minimum vertical and horizontal clearances
 - Major topographic features
 - Proposed vertical profile
 - Survey controls and bench marks
 - Major tonographic features

- Stationing along horizontal alignment
- Location of expansion and fixed bearings
- Design Method (LFD)
- Allowable stresses
- Basic material properties (concrete strengths, classifications, steel types, pile sizes, capacities and tip elevations)
- Pile quantities
- Relationship to the existing structure

b. Typical pier(s) and abutment details;

c. Cross section of proposed superstructure showing type, size and locations of structural elements;

d. Proposed method of construction;

e. Connections to existing roadway

f. Utility provisions;

g. Maintenance of traffic provisions;

h. Proposed method of removal of the existing structure and approaches and final disposition;

i. Preliminary specifications;

j. Technical reports;

k. Preliminary design calculations.

...

3.0 Technical Proposal Evaluation Criteria

The Technical Review Committee shall review the technical proposal submitted by each firm and shall establish a technical score for each firm based on the following criteria:

ITEM	VALUE
1. Technical Criteria	Maximum Score 80
a. Innovativeness	6
b. Maintenance of Traffic	10
c. Environmental Impact	10
d. Aesthetics	6
e. Maintainability	6
f. Ability of Future Widening	6
g. Redundancy	6
h. Understanding of Scope of Work and Services	12
i. Geotechnical Services/Investigations	12
j. Familiarity of design to the Department	6
2. Management Criteria	Maximum Score 20
a. Contractor's Experience with type of bridge proposed	4
b. Contractor's quality control plan	4
c. Previous Joint Consultant-Contractor Experience and design/build experience	4
d. Experience and availability of staff	4
e. Experience of Geotechnical Staff	4
Total Maximum Score:	
	100

Total Maximum Score: 100

SPECIFICATIONS AND CHANGES THERETO:

3. PROPOSAL

ARTICLE 1-28 (Page 4); The existing definition is deleted and the following is substituted:

Proposal. The offer of a bidder, on the prescribed form, to perform the work **and to furnish the required consulting services** and materials at the prices quoted within the proposed contract time.

4. WORK.*1-51 Work.*

All labor, materials and incidentals required for the construction of the improvement for which the contract is made, including superintendence, use of equipment and tools, and all services and responsibilities prescribed or implied, which are necessary for the complete performance by the Contractor of his obligations under the contract. Unless otherwise specified herein or in the contract, all cost of liability and of performing the work shall be at the Contractor's expense." (Modified as below)

ARTICLE 1-51 (Page 7); Add the following to the existing definition. The term "work" shall also be deemed to include **engineering services, geotechnical services, and all incidental costs** relating thereto.

5. ADDITIONAL DEFINITIONS.

The following additional definitions are added to the end of Section 1 on Page 7. Section 1 is expanded by the following new Articles:

Article 1-59; **Design/Build**. Design/Build means providing responsibility within a single contract for design, construction, and where services within the scope of practice of professional engineering, as defined by the laws of the State of Florida, are performed by an Engineer duly registered in the State of Florida, and where services within the scope of construction contracting, as defined by the laws of the State of Florida, are performed by a Contractor qualified and licensed under the applicable Florida Statutes.

Article 1-60; **Firm**. Firm means any individual, firm, partnership, corporation, association, joint venture, or other legal entity permitted by law to practice engineering and/or construction contracting in the State of Florida.

Article 1-61; **Contractor's Engineer** – Contractor's Engineer is the engineering firm responsible for the engineering design portion of this contract.

Article 1-62; **Preliminary Engineering Report** – The preliminary engineering report on this project, if any, supplied by the Department.

Article 1-63; **Contractor's Consultants**. This is intended to be a general term which specifically includes the Contractor's Engineer, and/or the geotechnical firm, regardless of the contractual or other bases of affiliation with the Contractor or each other for work on this project, and also includes all other firms from which specialty engineering or testing work is purchased or otherwise obtained for use on this project.

other bases of affiliation with the Contractor or each other for work on this project, and also

Article 1-64; Request for Proposal. A request by the Department for submittal of technical and price proposals, to a firm which has submitted a letter of interest concerning a design/build project and which has been deemed to be highly qualified to be a contractor for this type of project, in accordance with Rule 14-91.006(4). Firms receiving a Request for Proposal will also receive a Design Criteria package.

Article 1-65; Special Requirements – For the purpose of this design/build contract, the term “Special Requirements” shall apply to the project requirements that are developed by the Contractor’s Engineer and/or the Geotechnical Consultant that set out or relate to the manner of performing the work. These Special Requirements shall be considered as special provisions.

Article 1-66; Design Criteria Package. The Special Provisions, Supplemental Specifications, Criteria for Contractor Prepared Design, Scope of Work and Services, and all other documents attached thereto, which together, set forth the criteria for work to be done to complete the work of this contract.

9. EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS AND SITE OF WORK. (FA 10-17-94) (REV 8-3-94)

~~2-4 Examination of Plans, Specifications, Special Provisions and Site of Work~~

~~The bidder is expected to examine carefully the site of the proposed work, and the proposal, plans, specifications and contract forms for the work contemplated, before submitting a proposal. Such shall also include investigation as to the condition to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished and as to the requirements of all contract documents.~~

~~Details pertaining to boring, as shown on the plans, are not guaranteed to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated. The Contractor shall examine boring data, where available, and make his own interpretation of the subsoil investigations and other preliminary data, and shall base his bid on his own opinion of the conditions likely to be encountered.~~

~~The bidder’s submission of a proposal shall be considered prima facie evidence that he has made examination as described in this Article. (Modified as below)~~

ARTICLE 2-4 (Pages 9 and 10) is deleted and the following substituted:

All questions prior to technical proposal submittal should be directed to or through Mr. S.J. Benak, District Construction Engineer. The District Construction Engineer may be contacted at the District Three Office, Phone Number (904) 638-0250, ext. 249. **The bidder shall also be responsible for investigating the amount of engineering and geotechnical services that will be required in order to familiarize himself with the total scope of work.**

13. CONSIDERATION OF PROPOSALS.

ARTICLE 3-1 (Page 12) is deleted and the following substituted:

3-1 Consideration of Proposals.

- (1) Technical and bid proposals will be received from those firms deemed to be the most highly qualified by the Certification and Technical Review Committee and approved

3-1 Consideration of Proposals.

under Rule 14-91.006(4). **For all bridge projects, a prebid conference will be held shortly after selection of the final firms.** Proposals shall be segmented into two packages:

- (a) Technical Proposal. **A technical proposal shall include preliminary design plans, preliminary specifications and special requirements, technical reports, calculations, proposed schedules, and other data requested in response to the Request for Proposal and the Design Criteria Package.**
- (b) Bid Proposal. **Bid proposals shall include one lump sum cost for all design, geotechnical surveys, and construction of the proposed project, preliminary design submittal reports, and all other data requested in response to the Request for Proposal and the Design Criteria Package.** The bid proposal shall also include the Contractor's proposed contract time. The bid proposal shall be submitted in a separate sealed package. The package shall indicate clearly that it is the bid proposal and shall identify clearly the firm's name, project description, or any other information required by submission of proposals. The bid proposal shall be secured by the District Contract Administration Office until such time as the Final Selection Committee meets to select the design/build proposal.

18. INTENT OF CONTRACT.

ARTICLE 4-1 (Page 15) is deleted and the following substituted:

4-1 Intent of Contract

~~*The intent is to provided for the construction and completion in every detail of the work described in the contract. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies, required to complete the work in accordance with the plans, specifications and terms of the contract. (Modified as below)*~~

4-1 Intent of Contract.

The intent is to provide for the engineering, required geotechnical services, furnishing of materials, construction, and completion in every detail of the work described in this contract. The Contractor shall furnish all engineering and all of its associated direct and indirect costs, construction labor, materials, equipment, supervision, tools, transportation, and supplies required to complete the work in accordance with the requirements of the Design Criteria Package, the Standard Specifications, and the terms of this Contract.

The Contractor's Engineer shall develop plans in accordance with their Technical Proposal. No substantial change in general plan or character of the work shall be made. The plans shall be dated, stamped, and signed by the Contractor's Engineer and shall be transmitted to the Engineer for the project records. The Contractor's Engineer shall schedule the transmittal so that the plans are received by the Engineer at least 15 working days prior to commencement of the work described in the plans.

19. ALTERATION OF PLANS OR OF CHARACTER OR WORK.

SUBARTICLE 4-3.1 (Page 15) is deleted and the following substituted:

~~4-3.1 General: Alterations provided for herein shall not be considered as a waiver of any conditions of the contract or the bond, nor to invalidate any of the provisions thereof. (Modified as below)~~

4-3.1 Alteration of Plans or Character of Work: **The Engineer or Contractor's Engineer shall have the right to make alterations in the plans or character of work as may be considered necessary or desirable during the progress of the work for satisfactory completion of the proposed construction, provided no alterations shall be made which will result in a substantial change in the general plan or character of the work.** Alterations provided for herein shall not be considered as a waiver of any conditions of the Contract or the bond, nor shall they invalidate any of the provision hereof.

4-3.2 Increase or Decrease in Quantities:⁸

4-3.2.1 Significant Changes in the Character of Work: *The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.*

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.

If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" shall be construed to apply only to the following circumstances:

(A) *When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or*

(B) *When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed....*

20. CONDITIONS REQUIRING SUPPLEMENTAL AGREEMENT.

~~4-3.2.3 Conditions Requiring Supplemental Agreement: Supplemental agreement shall be used to clarify the plans and specifications of the contract; to document quantity overruns that exceed five percent of the original contract amount; to provide for unforeseen work, grade changes, or alterations in plans which could not reasonably have been contemplated or foreseen in the original plans and specifications; to change the limits of construction to meet field conditions; to provide a safe and functional connection to an existing pavement; to settle contract claims; and to make the project functionally operational in accordance with the intent of the original contract. Supplemental Agreement may be used to expand the physical limits of a project only to the extent necessary to make the project functionally operational in accordance with the intent of the original contract. The cost of any such agreement extending the physical limits of a project shall not exceed \$100,000 or ten percent of the original contract price, whichever is greater. (Modified as below)~~

SUBARTICLE 4-3.2.3 (Pages 16 and 17) the first paragraph is deleted and the following substituted:

Supplemental agreements, if any, shall be initiated by the Engineer.

⁸ Remains as per 1991 Specifications.
Supplemental agreements, if any, shall be initiated by the Engineer.

No work covered by a supplemental agreement shall be performed before written authorization is given by the Engineer. Such written authorization shall set forth the prices and other pertinent information and shall be reduced to written contract document form promptly. No payment shall be made on a supplemental agreement prior to the Department's approval of the document.

Supplemental Specifications 1994

4-3.2.3 Conditions Requiring Supplemental Agreement is expanded as follows:

Additional or unforeseen work of the type already provided by the contract for which there is a contract price will be paid for at such contract price in accordance with 4-3.2.1.

Additional or unforeseen work having no quantity or price provided in the contract will be paid at a negotiated price.

Where the cost is negotiated, the Contractor shall submit an estimate to the Department in terms of labor, materials, equipment, overhead, and other expenses incurred solely as a result of the additional or unforeseen work.

The portion of the cost for equipment shall be based on the Rental Rate Blue Book for Construction Equipment, published by Dataquest (version current at time or work) in accordance with the following:

- (a) *Costs shall be provided on an hourly basis. Hourly rates, for equipment being operated or on standby, shall be established by dividing the Blue Book monthly rates by 176. The columns, itemizing rates, labeled "Weekly", "Daily", and "Hourly" shall not be used.*
- (b) *On all projects, the costs shall be adjusted by regional adjustments and by Rate Adjustment Tables according to the instructions in the Blue Book.*
- (c) *Reimbursement for the equipment being operated shall be at a rate of 75 percent of the Blue Book ownership cost plus 100 percent of the Blue Book operating costs.*
- (d) *Reimbursement for equipment, required to be idled and on standby, shall be at 50 percent of the Blue Book ownership cost, only. No more than eight hours of standby will be paid on a single day.*
- (e) ***No additional overhead will be allowed on equipment costs.***
- (f) *Transportation to and from the location at which the equipment will be used will be allowed. If the equipment requires assembly or disassembly for transport, the time for this will be paid at the rate for standby equipment.*

End Supplemental Specifications 1994

21. DIFFERING SITE CONDITIONS.

~~*4-3.4 Differing Site Conditions: During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.*~~

~~*Upon written notification, the Engineer will investigate the conditions, and if he determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor whether or not an adjustment of the contract is warranted.*~~

~~*No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice. (Modified as below)*~~

SUBARTICLE 4-3.4 (Page 17) is deleted. See Article 9-3 of these Special Provisions

4-4 Unforeseeable Work

When work is required which is not covered by a price in the contract and such work does not constitute a "Significant Change" as defined in 4-3.2.1, and such work is found essential to the satisfactory completion of the contract within its intended scope, an adjustment will be made to the Contract. The basis of payment of such adjustment will be in the amount as the Engineer may determine to be fair and equitable.

completion of the contract within its intended scope, an adjustment will be made to the Contract. The basis of payment of such adjustment will be in the amount as the Engineer may determine to be fair and

27. DEPARTMENT PLANS.

SUBARTICLE 5-1.2 (Page 22) is expanded by the following new paragraph:

For design/build projects, the plans furnished by the Department will consist of those drawings included in the Design Criteria Package and, if appropriate, the plans of the existing bridge or other structure. All other drawings, roadway plans, etc., shall be developed by the Contractor's Engineer.

28. ERRORS OR OMISSIONS IN PLANS OR SPECIFICATIONS.

5-4 Errors or Omissions in Plans or Specifications

The Contractor shall take no advantage of any apparent error or omission which he might discover in the plans or specifications but shall forthwith notify the Engineer of such discovery, who will then make such corrections and interpretations as he deems necessary for reflecting the actual spirit and intent of the plans and specifications. (Modified as below)

ARTICLE 5-4 (Page 26) is expanded by the following new paragraph:

For design/build projects, errors and omissions discovered in the plans or specifications shall also be brought to the attention of the Contractor's Engineer as well as the Engineer. Resolution of the question by the Contractor's Engineer is intended, **and at no additional cost to the Department.** All such determinations are subject to approval of the Engineer. In all other respects, this Article remains unchanged.

30. CLAIMS BY CONTRACTOR.

5-12 Claims by Contractor.

~~Where the Contractor deems that extra compensation is due him for work or materials not clearly covered in the contract or not ordered by the Engineer, the Contractor shall notify the Engineer in writing of his intention to make claim for extra compensation, before he begins the work on which he bases the claim. If such notification is not given, and the Engineer is not afforded proper opportunity for keeping strict account of actual cost, then the Contractor thereby agrees to waive the claim for such extra compensation. Such notice by the Contractor, and the fact that the Engineer has kept account of the cost shall not in any way be construed as establishing the validity of the claim or the allowability or method for computing any compensation of such claim. In case the claim, after consideration by the Engineer, is found to be valid, it shall be allowed and paid for as an extra as provided herein. Nothing in this Article shall be construed as establishing any claim contrary to the terms of 4-3. (Modified as below)~~

ARTICLE 5-12 (Page 31) the first sentence is deleted and the following substituted:

Where the Contractor deems that extra compensation is due him, as defined herein, the Contractor shall notify the Engineer in writing of his intention to make a claim for extra compensation, before he begins the work in which he bases the claim.

50. MEASUREMENT OF QUANTITIES.

ARTICLE 9-1 (Pages 72-74) is deleted and the following substituted:

ARTICLE 9-1 (Pages 72-74) is deleted and the following substituted:

9-1 Measurement of Quantities.

The following general statements shall apply to quantities and their measurement with respect to payments and determination of work completed on design/build projects.

The pricing and payment format of this Contract is intended to be lump sum. To the greatest extent possible, the Contractor will be compensated for the percentage of the applicable **firm lump sum price**, less retention for the work completed as detailed in Subarticle 9-6.1. The percentage shall be that portion of the work completed as compared to the total amount of work contracted.

Unit prices and the measurement of quantity units associated therewith shall be utilized only on items that require payment in accordance therewith, if any, as set forth in the contract documents or any supplemental agreement(s). The only item of work being considered under a unit price basis, for adjustment purposes only, is bridge piling, preformed pile holes and bridge jacking.

51. COMPENSATION FOR ALTERED QUANTITIES.

ARTICLE 9-3 (Pages 78-80); For design/build projects. The following is added:

As stated in the Special Provision for Article 9-1, the intent of **this Contract is to have pricing for the work established as firm lump sum prices to the greatest extent possible.** In keeping therewith, it is not the general intent to compensate the Contractor for increased or decreased quantities for work covered by a firm lump sum price.

However, where the pricing for a portion of the work is established under a unit price format, specifically the adjustment of the firm lump sum price for variations in: a) lengths of piling, (b) preformed pile holes, c) bridge jacking the established procedures, for quantity variations, existing under Article 9-3 will be utilized.

QUESTIONS AND ANSWERS

8. QUESTION: The scope talks about the possibility of shut down of construction operations due to vibration/rotation of the existing bridges. **If this is the case will the DOT compensate the contractor for the delays?**

ANSWER: If the contractor complies with scope, and **differing site conditions occurs**.
Yes.

31. QUESTION: Are MSE retaining walls acceptable?

ANSWER: Yes.

73. QUESTION: Bid documents – Break down of lump sum. Can we add more and what about MSE walls.

ANSWER: Yes.

79. QUESTION: On page A-10 of the design scope, section 4, the departments soils and foundations procedure manual is # 675-020-012-a, not #697.

ANSWER: *(No response)*

REVISIONS TO ATTACHMENTS

Attachment C: Section 2.7a – Changed Design Method to indicate LFD only.

CHANGES TO THE SPECIFICATIONS PACKAGE

5. Amendment No. 52, Compensation for Altered Quantities was modified.

DISPUTES REVIEW BOARD

PROCEDURE AND SCHEDULE FOR DISPUTES RESOLUTION: Disputes will be considered as quickly as possible, taking into consideration the particular circumstances and the time required to prepare detailed documentation. Steps may be omitted as agreed by both parties and the time periods stated below may be shortened in order to hasten resolution.

...

h. Within 15 days of receiving the Board's recommendations, both the Department and the Contractor will respond to the other and to the Board in writing, signifying either acceptance or rejection of the Board's recommendations. The failure of either party to respond within the 15 day period will be deemed an acceptance of the Board's recommendations. If the Department and the Contractor are able to resolve the dispute with or without the aid of the Board's recommendations, the Department will promptly process any required contract changes.

DISPUTES REVIEW BOARD – THIRD PARTY AGREEMENT

II. SCOPE OF WORK

D. Construction Site Visits: The BOARD members shall visit the project site to keep abreast of construction activities and to develop a familiarity of the work in progress. The frequency, exact time, and duration of these visits shall be as mutually agreed between the DEPARTMENT, the CONTRACTOR, and the BOARD.

In the case of an alleged differing site condition, or specific construction problem, it will be advantageous but not absolutely necessary for the BOARD to personally view any relevant conditions. If viewing by the BOARD would cause delay to the project, photographs and descriptions of these conditions collected by either or both parties will suffice.

FLORIDA

LAWTON CHILES
GOVERNOR



DEPARTMENT OF TRANSPORTATION

BEN G. WATTS
SECRETARY

P. O. Box 607
Chipley, FL 32428
March 7, 1997

Mr. John H. Duke, Chairman
Disputes Review Board
2932 Sunbittern Court
Windermere, FL 34786

RE: WPI#3148543, JOB#58002-3449, CONTRACT #E3720,
I-10 BRIDGE REPLACEMENT OVER BLACKWATER BAY,
SANTA ROSA COUNTY, ISSUE #1, FINDING OF FACT PERTAINING TO
CLAIM# 1 - WEST EMBANKMENT GLOBAL STABILITY ISSUE

Dear Mr. Duke:

The Dispute Review Board's findings and conclusions have been received. Although this issue has statewide ramifications concerning the Design Build Process, the Department is willing to determine the scope of entitlement as suggested. Therefore, negotiations will be started.

I appreciate the time and effort that the Board put into the resolution attempt, and an effort will be made to go forward with negotiations with the Contractor.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. J. Benak'. The signature is written in a cursive style and is positioned above the printed name and title.

S. J. Benak
District Construction Engineer

SJB:wb

DISPUTE REVIEW BOARD DECISION

December 8, 1997

Mr. S. J. Benak
District Construction Engineer
Florida Department of Transportation
1074 Highway 90 East
Chipley, Florida 32428
(904) 638-0250

Mr. Joseph M. Duffy
Vice President Heavy Civil Division
Traylor Bros., Inc.
835 North Congress
Evansville, Indiana 47715
(812) 477-1542

RE: State Job No. 58002-3449
W.P.I. No. 314-8543
Contract # E3720
Santa Rosa County
I-10 Bridge Replacement Over Blackwater Bay
Disputes Review Board

Subject: Disputes Review Board
Claim # 1A – Quantum of West Embankment Global Stability Entitlement.

On January 23, 1997, at the request of the Contractor, Traylor Bros., Inc. (Traylor), and the Florida Department of Transportation (Department), the Disputes Review Board (DRB) held a hearing to consider the dispute over **entitlement** to additional compensation for extra work that has occurred as a result of “unforeseen conditions” at the West embankment of the bridge.

Both parties requested that should entitlement be established and acknowledged, the DRB not rule as to the quantum of such entitlement at this time, and the parties would attempt to negotiate the value of entitlement.

On February 20, 1997, the Disputes Review Board found that Traylor Bros./Finley McNary is **entitled** to **additional compensation** for extra work due to unanticipated and unforeseen site conditions. The Board found that there were **definite limits** to the scope of the entitlement and believed an attempt should be made by the Department and Contractor to negotiate those boundaries.

The Board advised the parties that, should such negotiations prove unfruitful, the Board would be prepared to rule as to the limits of justified entitlement. The attempts at resolution of the negotiations having failed, the parties involved have requested the DRB to quantify the justified entitlement.

On September 30, 1997 and October 1, 1997 the DRB held a hearing to evaluate the value of the claim as presented by the Contractor, Traylor Bros., Inc. and the Department’s representative, PBS&J. PBS&J had submitted documentation prior to the hearing, and Traylor submitted their evaluation at the hearing. Oral presentations were made by both parties at the hearing. The Board, requiring time to evaluate the two proposals, and to review additional information requested, recessed the hearing until November 25, 1997. After reviewing the proposals and additional information, the Board met separately on October 23, 1997 to discuss and consider the claim. Subsequent to that meeting, the Board requested that the November 25th meeting be expanded to include a workshop on November 24th with all persons responsible for the two proposals available to answer any questions the Board might have regarding the development of the costs identified in the two analyses.

While both the analysis by the Contractor and that of the Department considered the added value to the contract, the approach to the calculation of the entitlement by both parties was entirely different. The Contractor’s presentation evaluated the **actual cost** of the work completed, with the exception of an estimated allowance for the original contract items which were not incorporated in the work; whereas the Department determined the value added to be the difference between an **estimate** of the original plan and an **estimate** of the as-built project. The Contractor had also requested a time extension, the associated extended overhead for the period of extension, and an impact cost for labor and equipment

Department determined the value added to be the difference between an estimate of the original plan

DISPUTE REVIEW BOARD DECISION

acceleration asserted to be brought about by the change. The Department considered no time extension, extended overhead, or any impact costs.

In addition, the Department, through PBS&J, submitted an analysis prepared by the CEI, Metric Engineering, Inc., of the claim as presented by the Contractor. This analysis was based on the labor and equipment recorded by the CEI on the Daily Report of Construction for each item of work contained in the claim. The equipment rates used were Blue Book Rates, the labor rates, cost of materials, supplies and subcontracts were supplied from Contractor records. While the Department did not use this analysis to determine the cost associated with the change, it was prepared to check the validity of the Contractor's request and to aid in the negotiations.

The Board believes that the Department and the Contractor agree in theory to the items of work added and as-bid items deleted, i.e., bridge extensions and elimination of MSE walls. However, there remains a disagreement about the quantity of concrete sheetpile wall and steel sheetpiling required for stabilizing the West abutment of the Westbound bridge and the amount of time that should be allowed for the change.

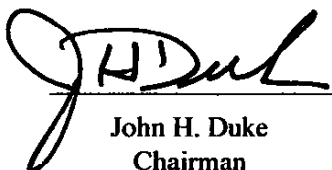
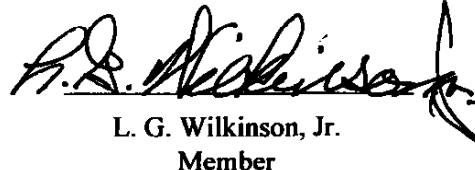
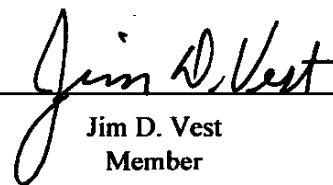
After thorough review of the material presented and an evaluation of the separate analyses of the claim, the Disputes Review Board finds that Traylor Bros./Finley McNary is entitled to the following as equitable compensation for extra work due to the unanticipated and unforeseen site conditions per the DRB's February 20, 1997 ruling:

- 1.) A time extension to the original contract of 60 calendar days.
- 2.) Additional compensation in the amount of \$ 2,601,526.44.

The time extension is not added to the contract time for the purpose of calculating any incentive award per the Special Provisions – Section 49. The additional compensation is for costs associated with the change, including all actual costs for the value added extra work performed¹, extended overhead, impact and/or acceleration costs, and includes a credit for reduction of items² contained in the original proposal.

The Board appreciates the cooperation by all parties involved and the information provided to make this ruling.

Blackwater River Bridge Replacement - Disputes Review Board

		
John H. Duke Chairman	L. G. Wilkinson, Jr. Member	Jim D. Vest Member

CC: Phenix Palmer
Don Davis
Julian McCrary

FILE DOCUMENT IN DISPUTE 1A QUANTUM

¹ And is inclusive of approximately 39,000 lf of Wick Drains and approximately 8,325 sf of Wall "F" previously recognized as reimbursable by the FDOT.

² Inclusive of deletion of 3,942 sf of Wall "C", 1,750 sf of Wall "B" and 1,710 sf of Wall "A".