

November 4, 2004

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**Re: SR 5 (US 1) (Dixie Highway)
Financial Project No. 229777-1-52-01
Dispute Review Board Hearing – Regular Excavation Quantity**

Dear Sirs:

The Florida Department of Transportation (FDOT) and Russell Engineering (REI) requested a hearing concerning Regular Excavation Quantities. Summaries of the FDOT's and REI's positions were forwarded to the Disputes Review Board (DRB), and a hearing was held on October 8, 2004.

ISSUE: Is the plan quantity for Item No. 2120-1, Regular Excavation in error and, if so, should REI be compensated at the contract unit price for any overrun in the quantity?

Contractor's Position

During the course of the project REI discovered an error in the plan quantity for Pay Item 2120-1 Excavation Regular. REI then quantified the excavation utilizing contract plan pages 233 to 284 in accordance with supplemental specifications page 123 section 120-12 Method of Measurement, specifically 120-12.2 Roadway Excavation. Upon completion of REI's quantification process it was confirmed that the Departments plan quantity was inaccurate.

REI supplied the Department with the calculations and requested that they increase the plan quantity to the correct volume calculated in accordance with the Supplemental Specifications. The Department denied this request and left us no other alternative but to bring this issue to the board for determination of entitlement. It is further requested by REI that the board rule on monetary value as well as entitlement. Enclosed for your review and utilization is all correspondence from REI and the Department in regards to this issue.

Supplemental Specification 120-12.2 states "The measurement will include only the net volume of material excavated between the original ground surface and the surface of the completed earthwork, except that the measurement will also include all unavoidable slides which may occur in connection with excavation classified as Roadway Excavation. The pay quantity will be the plan quantity provided that the excavation was accomplished in

substantial compliance with the plan dimensions and subject to the provisions of 9-3.2 and 9-3.4."

FDOT Specification 9-3.2.1 Error in Plan Quantity states "As used in this Article, the term "substantial error" is defined as the smaller of (a) or (b) below:

- (a) a difference between the original plan quantity and final quantity of more than 5%
- (b) a change in quantity which causes a change in the amount payable of more than \$5,000.00

On multiple job Contracts, changes made to an individual pay item due to substantial errors will be based on the entire Contract quantity for that pay item.

Where the pay quantity for any item is designated to be the original plan quantity, the Department will revise such quantity only in the event that the Department determines it is in substantial error. In general, the Department will determine such revisions by final measurement, plan calculations, or both, as additions to or deductions from the plan quantities."

REI quantified the excavation in accordance with the requirements of 120-12.2 and calculated a volume of 18,198 M3, the Departments plan quantity is 6,003 M3. The actual quantity of excavation is greater than the 5% or \$5,000.00 required under section 9-3.2.1 for a plan quantity revision. REI supplied the Department with all calculations pursuant to section 9-3.2.1. Therefore, the Department should in accordance with its own "Method of Measurement" and "Error in Plan Quantity" Specifications revise the plan quantity.

Enclosed you will find REI's calculations for earthwork volume, time extension and extended overhead and MOT payment request with all appropriate backup.

Department's Position

BACKGROUND: This project consists of over a mile of roadway reconstruction along Dixie Highway in the vicinity of downtown West Palm Beach. The scope includes new underground utility, replacement of the drainage system and a new composite roadway pavement. To accomplish the new composite roadway pavement, the contract includes four pay items as follows:

First, there is a lump sum, clearing and grubbing pay item (2110-1) that amounts to \$200,000.00. Second, there is a pay item (2110-4) for the removal of 52,432 square meters of existing concrete that amounts to \$235,000.00 and includes the old existing concrete pavement beneath the existing asphalt roadway. Third, there is a pay item (2120-1) for 6,003 cubic meters of regular excavation that amounts to \$108,000.00. Fourth, there is a pay item (2120-6) for 3,044 cubic meters of embankment that amounts to \$20,669.20. Payments under these pay items are ongoing as the work progresses. **Refer to Attachment E for Pay Estimate Summary to Date.**

In addition, Plan Sheet No. 15 under pay item note 2110-4, describes the existing asphalt that is on top of an existing concrete pavement that varies in thickness from six inches (6") to fourteen (14") inches. **Refer to Attachment C.**

ISSUE: Whether the regular excavation quantity in the contract should include the quantity of existing concrete pavement beneath the roadway, which is paid for separately under removal of existing pavement (2110-4).

The contractor requested that the regular excavation pay item (2110-4) quantity be increased to include the existing concrete pavement beneath the roadway. The Engineer declined to increase the quantity on the grounds that the contract did not support the request. **Refer to Attachment F for correspondence on the matter.**

DEPARTMENT'S POSITION: At the beginning of article 120-2.2, page 115, of the Supplemental Specifications, the regular-excavation pay item quantity "includes roadway excavation...as defined..." under subarticle, 120-2.2.1. Specifically, "[r]oadway [e]xcavation consists of the excavation and the utilization or disposal of all materials necessary for the construction of the roadway, ditches, channel changes, etc., [EXCEPT] **as may be specifically shown to be paid for separately** and that portion of lateral ditches...as shown in the plans." This definition therefore, contains two exclusions. The first exclusion, as applicable here, applies where there is a separate payment, namely 2110-4. The second exclusion, which is not applicable here, applies where there are lateral ditches excavation, namely 2120-3. **Refer to Attachment A for Supplemental Specifications, Section 120 that replaced the corresponding Standard Specification in its entirety.**

The contract documents plan clearly specify that the existing concrete pavement beneath the roadway is to be paid for separately under pay item 2110-4. **Refer to Attachment E for verification.**

Further, Plan Sheet No. 24, under general note 12, states to "[r]emove all existing concrete sidewalk, curb, and **pavement...payment** to be included in pay item 2110-4, removal of existing pavement." To reinforce this even further with definition, Plan Sheet No. 15, pay item note for 2110-4 states that the "existing concrete **pavement** beneath the existing roadway is also included in this pay item" and the pavement varies "extensively from 150mm [6"] to more than 350mm [14"] thick." Consequently, the existing concrete pavement beneath the roadway is EXCLUDED from the definition of regular excavation because it is paid for separately under pay item (2110-4). As a result, of its exclusion from this definition, the quantity of regular excavation displaced by the existing concrete pavement beneath the roadway is correctly deducted and not included in the plan quantity of 6,003 cubic meters. **Refer to Attachments C and D for Plan Sheets No. 15 and No. 24 respectively, for the referenced notes.**

The contract work under removal of existing pavement, pay item 2110-4, is all-inclusive so as to prevent carry over costs to the regular excavation pay item. This is supported by the supplemental specifications. Specifically, under sub article 110-12.3, page 113-4, Removal of Existing **Pavement**, "[p]rice and payment will be full compensation for performing and completing all the work of **removal and satisfactory disposal.**" **Refer to Attachment B for Supplemental Specifications, Section 110 that replaced the corresponding Standard Specification in its entirety.**

CONTRACTOR'S POSITION: *The contractor relied on article 120-12, Method of Measurement, specifically 120-12.2, page 123 of the Supplemental Specifications, which is located 8 pages after the definition of roadway excavation on page 115. Refer to Attachment A. Also, refer to Attachment F for REI's Letter dated July 26, 2004 and CTE's Letter dated September 20, 2004. Under that subarticle, the roadway excavation "include only the [NET] volume of material excavated...." and not the gross volume. By REI disregarding the "net volume" and using the gross volume between the "original ground surface and the surface of the completed earthwork," the contractor fails to considers deductions of the volume of material displaced by the existing concrete pavement and the reduction of the quantity of regular excavation accordingly.*

CONCLUSION: *Based on the contract specifications, the contractor's position is without merit. The regular excavation pay item does not warrant an upward adjustment in the plan quantity displaced by the existing concrete pavement. Further, should the quantity of regular excavation in the contract be increased by the displaced material due to the material displaced by the existing concrete pavement, the contractor would be compensated twice. First, by pay item 2110-4 that is all-inclusive; it includes removal and disposal. Second, by being paid for a much larger theoretical volume (17,085 cubic meters) of regular excavation than actually exists (6,003 cubic meters) on the project.*

Contractor's Rebuttal

Reference is made to the Department's Position Paper dated October 4, 2004 submitted by Robert A. Cedeno, P.E.

We have read and reread this position paper many times. After careful consideration it is our believe that much of the arguments used therein are no more than smoke and mirrors since they do not relate to the issue at hand which is the appropriate pay quantity calculation method for bid item 2120-1 Regular Excavation. In any event the following will address the Department's assertions:

*First, for clarification purposes under the heading of "**Background**" this project consists of many "Pay Items" and many "Plan Sheets". This issue is limited to Pay Item 2120-1 Regular Excavation.*

*The "**Issue**" statement is misleading and should be corrected to:*

Whether the regular excavation pay item should be quantified in accordance with Contract Supplemental Specification Article 120-12.2.

*The "**Department's Position**" appears to be relying on five (5) different contract specification articles and or plan notes and more importantly their interpretation of same. We respond to each as follows:*

1. Article 120-2.2.1 which reads in its entirety as follows:

Roadway Excavation: *Regular Excavation consists of the excavation and the*

utilization or disposal of all materials necessary for the construction of the roadway, ditches, channel changes, etc., except as may be specifically shown to be paid for separately and that portion of the lateral ditches within the limits of the roadway right-of-way as shown in the plans.

The Department is attempting to argue by a misinterpretation of a small excerpt of the above specification specifically "except as may be specifically shown to be paid for separately" and then conclude that this "...exclusion, as applicable here, applies where there is a separate payment, namely 2110-4." Of course this is not correct.

By reading Supplemental Specification Article 120-2 Classification of Excavation and each subarticle thereto it is crystal clear that this exception is directed and limited to other classifications of excavation such as (2) Subsoil Excavation, (3) Lateral Ditch Excavation, and (4) Channel Excavation which would specifically be paid for separately under other department pay items. This is not the case here. Also important is the fact that no pay item note exists at all for 2120-1 much less alerting bidders to any portion "specifically shown to be paid for separately. **See Supplemental Specification 120-2 pages 115 and 116.**

To better illustrate the proper interpretation we have listed and highlight the applicable specifications:

Sub Article 120-2.1 General under the heading of Classification of Excavation states in part: The Department **may** classify excavation specified under this Section for payment as any of the following: (1) Regular Excavation, (2) Subsoil Excavation, (3) Lateral Ditch Excavation, (4) Channel Excavation. If the proposal **does not** show Subsoil Excavation or Lateral Ditch Excavation as **separate items of payment**, include such excavation under the item of Regular Excavation.

Sub Article 120-2.2.1 Roadway Excavation states in its entirety: Roadway Excavation consists of the excavation and the utilization or disposal of all materials necessary for the construction of the roadway, ditches, channel changes, etc., except as **may be specifically shown to be paid for separately** and that portion of the lateral ditches within the limits of the roadway right-of-way as shown in the plans.

2.) We are not quite sure whether the paragraph of "The contract documents plan clearly specify that the existing concrete pavement beneath the roadway is to be paid for separately under pay item 2110-4" is an argument or a simple statement. If simply a statement of fact we are in agreement that there is a pay item number 2110-4. This has nothing to do with the issue at hand and in fact falls under the Clearing and Grubbing specifications.

2. Plan Sheet No. 24, general note 12 states in its entirety as follows:

"12. REMOVE ALL EXISTING CONCRETE SIDEWALK, CURB, AND PAVEMENT WITHIN THE LIMITS OF CONSTRUCTION, STA. 1072+94.000 TO STA. 1093+38.184, EXCEPT AS SHOWN IN THE PLANS. (PAYMENT TO BE INCLUDED IN PAY ITEM 2110-4, REMOVAL OF EXISTING PAVEMENT). NO SIDEWALK SHALL BE REMOVED OUTSIDE THE RIGHT-OF-WAY. "

Simply stated this plan note has no bearing on the issue at hand and accordingly no

rebuttal is necessary.

3. Plan Sheet No. 15, Pay Item Note for 2110-4 states in its entirety as follows:
"2110-4 INCLUDES REMOVAL OF EXISTING BRICK PAVERS WITHIN THE RITE-OF-WAY AS SHOWN IN THE PLANS. REMOVAL OF EXISTING CONCRETE PAVEMENT BENEATH THE EXISTING ROADWAY IS ALSO INCLUDED IN THIS PAY ITEM; IT SHOULD BE NOTED THAT THE THICKNESS OF THIS CONCRETE LAYER HAS BEEN FOUND IN ADJACENT PROJECTS TO VARY EXTENSIVELY FROM 150mm THICK TO MORE THAN 350mm THICK NO ADDITIONAL PAYMENT SHALL BE GIVEN FOR UNFORSEEN THICKNESSES ON THIS M2 ITEM"

While the Department has made the giant leap in its interpretation to conclude this plan note means "Consequently, the existing concrete pavement beneath the roadway is EXCLUDED from the definition of regular excavation because it is paid for separately under pay item (2110-4)" seems to be quite amazing. Even more amazing is that the Department would have us believe that a pay item note for 2110-4 would alert bidders that some mysterious, unknown (even now) and unquantified (even now) volume has been or would be deducted from a totally separate pay item or in this case 2120-1. Surely this pay item plan note simply advises bidders nothing more than the existing concrete pavement removal that is paid for by pay item 2110-4 varies in thickness from 150mm to more than 350mm and no additional payment will be given for removal and disposal of unforeseen thickness. It certainly does not exclude some unknown quantity from any other bid pay item. Again simply stated this plan note has no bearing on the issue at hand.

5. The last paragraph of the Department's Position Paper states "The contract work under removal of existing pavement, pay item 2110-4, is all-inclusive so as to prevent carry over costs to the regular excavation pay item. Specifically, under sub article 110-12.3, page 113-4, Removal of Existing Pavement, [p]rice and payment will be full compensation for performing and completing all the work of removal and satisfactory disposal."

Again the Department has made a giant leap in its interpretation of "all-inclusive". What is included in this pay item pursuant to Supplemental Specification 110-12.3 is the "removal" and "disposal" cost. Not required to be included and in this case not included is the rehandling and trucking cost since it is covered in pay item 2120-1 Regular Excavation pursuant to the quantification method of Supplemental Specification Article 120-12.2 which states in part ...between the original ground surface and the surface of the completed earthwork,....

Based upon the misplaced logic of the Department's argument here an additional deduction should also be made from pay item 2120-1 Regular Excavation for the volume comprised of the flexible asphalt pavement which is included in pay item 2110-1 Clearing and Grubbing. Furthermore, utilizing this logic we are absolutely certain that many other pay items exists that this same argument could be used to incorrectly reduce the regular excavation pay item quantity. As we all know, this is not now nor has it ever been the case.

Since we have previously set forth our position in clear detail, it is not necessary for any rebuttal to the Department's statement identified under the heading of "Contractor's

Position" however it is appropriate to point out yet another specification misinterpretation relied upon here. Supplemental Specification Article 120-12.2 "NET volume of material excavated" is simply the difference between the cut and fill areas. Does "NET" include the volume of flexible pavement and other pay items or is that part of the "GROSS"?

*It is clear to us that not only the Department but Mr. Robert Cedeno as the CEI representative on a prior project, State Project No. 93050-3509 State Road No. 805 (Dixie Hwy) in Palm Beach County, are well aware of the appropriate method to notify bidders concerning pay item modifications which is exactly what was accomplished on plan sheet No. 26 for that project by utilizing an appropriate Regular Excavation Pay Item Note. **See copy of plan sheet No. 26 Pay Item Notes 2120-1 attached.***

On our project dispute issue at hand, there simply is no pay item note at all for 2120-1 Regular Excavation and instead it is being argued that a totally separate and distinct pay item note 2110-4 Pavement Removal should alert bidders to a mysteriously unknown quantification modification for regular excavation. We believe and are confident that you will agree it is the Department's responsibility to clearly and unambiguously identify the work and not the responsibility of bidders to look for the needle in the hay stack such as is being argued here.

Furthermore, it is well established that any ambiguity of contract documents are to be interpreted against the drafter or in this case the Department. On the other hand, if a bidder's interpretation of the contract documents are reasonable they should stand. We submit that in each case above our interpretations are reasonable.

I guess it could be argued that an Elephant's trunk is made of Piano keys, however that would not make it so. Just like we could go through and pick out small excerpts from the specifications that would say "the Department will pay all Contractors double the amount of the pay item unit price". While this sounds good to contractors and such an argument could be made, this would not make it so.

We have made a time analysis study without any consideration to discussions prior to our letter of Request dated, July 26, 2004 and ConsulTech's denial dated September 20, 2004 (both identified as attachment F in the Department's Position Paper) which resulted in a consumption of fifty six (56) days for the one pay item's evaluation. Considering that there are one hundred ninety three (193) pay items, this project would take ten thousand eight hundred eight (10,808) days or twenty nine and sixty one hundredths (29.61) years to find the needles in the hay stack on each pay item.

We look forward to your favorable ruling so that pay item number 2120-1 Regular Excavation can finally be computed in the unmodified method pursuant to Contract Supplemental Specification Article 120-12.2. and our previously submitted position papers.

DRB Findings

The crux of the issue at hand involves two things:

1. How should the Regular Excavation be measured and;
2. Whether or not the volume of the concrete pavement should be

included in this measurement.

FDOT cites Article 120-12.2 which states:

“The measurement will include only the net volume of material excavated between the original ground surface and the surface of the completed earthwork, except that the measurement will also include all unavoidable slides which may occur in connection with excavation classified as Roadway Excavation...”

The Board believes that the intent of this specification is to merely define that cuts and fills are to be taken into account when determining quantity.

In the pay item notes, the plans state:

“INCLUDES REMOVAL OF EXISTING BRICK PAVERS WITHIN THE RIGHT-OF-WAY AS SHOWN IN THE PLANS. REMOVAL OF EXISTING CONCRETE PAVEMENT BENEATH THE EXISTING ROADWAY IS ALSO INCLUDED IN THIS PAY ITEM: IT SHOULD BE NOTED THAT THE THICKNESS OF THIS CONCRETE LAYER HAS BEEN FOUND IN ADJACENT PROJECTS TO VARY EXTENSIVELY FROM 150mm THICK TO MORE THAN 350mm THICK. NO ADDITIONAL PAYMENT SHALL BE GIVEN FOR UNFORSEEN THICKNESSES ON THIS M2 ITEM.”

This note is only notifying the bidders that there is concrete pavement to be removed and no consideration will be given for additional compensation if the concrete pavement runs thicker than anticipated. It does not address Regular Excavation.

General Note No. 12 states:

“REMOVE ALL EXISTING CONCRETE SIDEWALK, CURB, AND PAVEMENT WITHIN THE LIMITS OF CONSTRUCTION, STA. 1072+94.000 TO STA. 1093+38.184, EXCEPT AS SHOWN IN THE PLANS. (PAYMENT TO BE INCLUDED IN PAY ITEM 2110-4, REMOVAL OF EXISTING PAVEMENT). NO SIDEWALK SHALL BE REMOVED OUTSIDE THE RIGHT-OF-WAY.”

This is a standard type note which is placed in many plan sets and does carry some weight for FDOT’s argument. However, REI produced a set of plans for a different job of similar scope within District 4 on US 1; FPN 229004-1-52-01 (SPN 93050-3509) which contained the following pay item note:

“EARTHWORK QUANTITY EXCLUDES APPROXIMATELY 4,754 CM OF EXISTING PAVEMENT. THE EXISTING CONCRETE PAVEMENT PAID FOR UNDER ITEM 2110-4 (PAVEMENT REMOVAL)”.

The Board finds that the above note is much more specific and narrowly identifies exactly what is to be included (and excluded) from the Regular Excavation quantity. General Note No. 12 contained in this project is not nearly as detailed.

During the hearing of October 8, 2004 the following paraphrased question was posed to both parties:

“What constitutes natural ground (i.e. what is the definition of natural ground)?

The Engineer declined to answer the question. The Contractor’s answer was:

“It’s what you walk out there and see on the job prior to beginning construction.” (paraphrased)

The Board agrees with this definition and it is important because of the language contained in article 120-12.2:

“...material excavated between the original ground surface and the surface of the completed earthwork...”

Since the concrete pavement was contained within this defined area it should be included in the quantity of Regular Excavation. Further, it has been standard practice within the industry that when existing concrete pavement has been located within the excavation template the volume quantity is normally included in the excavation quantity as well as included in the area quantity of pavement removal.

Lastly, the question was brought up concerning what the other bidders might have assumed or interpreted and whether any of the unit bid prices might have been unbalanced. At the Board’s request, Mr. George Russell Jr. of REI provided the unit prices and extended prices of 6 bidders on the project. Below is a spreadsheet containing the results:

Contractor	Item No. 2110-4 Removal of Existing Pavement Extended Price	Item No. 2120-1 Regular Excavation Extended Price	Total Combined	Delta
Russell Engineering	\$235,944.00	\$108,054.00	\$343,998.00	0.00
Community Asphalt	\$131,080.00	\$90,045.00	\$221,125.00	122,873.00
De Moya Group	\$62,918.00	\$120,060.00	\$182,978.00	161,020.00
Foster Marine	\$524,320.00	\$60,030.00	\$584,350.00	(240,352.00)
Lanzo Construction	\$419,456.00	\$162,081.00	\$581,537.00	(237,539.00)
Weekley Asphalt	\$566,265.00	\$165,322.00	\$731,587.00	(387,589.00)
Average of all	\$323,330.50	\$117,598.67	\$440,929.17	(96,931.17)

REI’s bid price for item no. 2110-4, Removal of Existing Pavement, was the third lowest. Their price for item no. 2120-1, Regular Excavation was third lowest as was the combined total of the two items. In fact, REI’s bid was lower than the average of all bidders. Therefore the Board concludes that there was no unbalancing on the part of REI.

In an email from Mr. Dennis J. Barber of the FDOT State Construction Office to Ms. Deborah Ihsan, FDOT District 4 Operations Support Manager, it is stated:

“...But here is the way I see it. If there is a [sic] item for Removal of Existing Pavement, then this is where the Contractor gets compensated for removing existing concrete. This volume should not be included in excavation of any kind. The only way this volume would be accounted for

is if we were raising the elevation of the roadways, and then and only then would it be included in embankment or borrow.”

The above statement did not cite any specifications or plan notes and the Board feels that this was not properly researched by Mr. Barber.

The Board further consulted FDOT District 6 construction personnel and described the issue to them. District 6 personnel indicate that their policy is to include the pavement within the quantity of Regular Excavation.

DRB Recommendation

The Board finds entitlement to the Contractor's position and recommends that REI be compensated for the additional volume of Regular Excavation which includes the volume of concrete pavement at the contract unit price for item 2120-1. The specifications and plan notes cited in the hearing and position papers are sufficiently vague to support this recommendation. Due to time and money constraints the Board has not checked the quantity but FDOT did stipulate that REI's method of measurement was correct.

The Board appreciates the cooperation by all parties involved and the information provided to make this recommendation. Please remember that failure to respond to the DRB and the other party concerning your acceptance or rejection of the DRB recommendation within 15 days will be considered acceptance of the recommendation.

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.

Respectfully Submitted,

Disputes Review Board

Rammy Cone, DRB Chairman
Eduardo Perez de Morales, DRB Member
Irwin Oster, DRB Member

SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:

DRB Chairman

cc: Clara Scott, FDOT