

September 2, 1998

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RE: SR 91 (Florida's Turnpike)
From M.P. 244.156 to M.P. 244.761 &
From M.P. 259.349 to M.P. 271.491
State Job No. 97920-3334 and 97750-3335
Contract 19833
Osceola & Orange Counties

Dear Sirs:

Subject: Disputes Review Board Hearing - Issues "A & B"
Recycle S-1 Asphalt.

On August 6, 1998, at the request of the Contractor, C. A. Meyer Paving and Construction Co. (Meyers), and the Florida Department of Transportation (FDOT), the Disputes Review Board (DRB) held a hearing to consider the subject dispute. Meyers and the FDOT presented certain testimony and copies of data prior to and during the hearing. Additional information was requested by the Board following the hearing and is incorporated into this review.

The Board was requested to determine "Entitlement" for the issues. Should Entitlement in favor of the Contractor be found, the parties would negotiate the time and value.

ISSUE "A":

Additional monetary compensation for Type "S" HMA due to negative variance in amount of RAP estimated in bid and that used in the approved Job Mix Formula.

Contractor's Position:

The Contractor based his "bid" pricing of Item 331-2 - Asph Conc Type S utilizing a maximum of 30% recycled asphalt material (RAP) obtained from the project. He relied on information contained in "Composition of Existing Pavement" reports included in the bid package in arriving at this conclusion. He believed that an approvable mix that met allowable design gradations could be designed utilizing 30% "RAP factored" material.

All of the available composition reports were not included in the Bid/Contracting Documents. Specifically, Zone 1-C (NB Travel & Passing Lane M.P. 268.659 to M.P. 269.10 & M.P. 269.60 to M.P. 270.80) was not furnished to the Contractor until after bids were received.

were received.

DISPUTE REVIEW BOARD DECISION

After the award of the contract and in preparation of the asphalt mix designs, asphalt cores were taken from area zones represented by existing pavement compositions (prebid and post bid). The Contractor determined that the FDOT provided pavement composition reports were inaccurate. Check asphalt cores taken by the State Materials Office (SMO) verified that Contract Pavement Compositions were inaccurate.

- Meyer stated Exhibit 6 of his presentation represented information used in preparation of his bid but later, during the Board's review, stated that was in error and Exhibit 16C was used during bidding.
- Meyer maintains composite core gradations included in bid documents varied from cores taken after contract award, preventing the use of 30% RAP anticipated in the bid.
- Meyer relied on certain RAP factors contained in FDOT Plant Technician's Manual to simulate changes in gradations resulting in milling operation.
- Design Mixes were submitted to FDOT using job core RAP gradations adjusted using the RAP degradation factors.
- Meyer claims cores taken from the project indicate a significant increase in the -200 sieve material from the composite cores included in bid package thereby reducing the amount RAP allowed in the Type S mixes.

Ultimately, an S-1 Recycle Asphalt Mix Design was approved that utilized 25% RAP material. By furnishing inaccurate information, the FDOT misled the Contractor as to the amount of RAP material that could be reasonably estimated to be utilized in the recycle mix design as well as the value of any credit to the FDOT for unincorporated RAP material. The Contractor is requesting compensation for the increased cost.

Department's Position:

FDOT maintains the specifications and plans clearly define data is for information only. Special Provisions page 6, section 7, subarticle 4-5-1 as expanded states in part:

"The Department is not responsible for the quality or quantity of any material salvaged."

- Composition of Existing Pavement reports contained in bid documents state:

"The values shown in this composition were determined from extraction of pavement cores taken at a minimum frequency of one per lane mile throughout the project.

The gradation values will become finer during processing of the existing pavement material.

The average asphalt content of the total quantity of existing pavement material after processing will be within +/- 0.5 percent of the average shown."

- Contractors are responsible and assume the risk for the decision to incorporate or not RAP into their mix designs and for the amount of RAP to be used for bid purposes.
- The amount of degradation that the milled material will experience is left for the Contractor to estimate and is not FDOT mandated.

- The purpose of showing existing asphalt pavement information and its suitability for recycling is to provide the bidders some general information about the material to be milled.
- Based on the Department's comparison and subsequent check of core results, it has been concluded that the difference in percent fines (-200 sieve) over the entire project is not sufficient to warrant an adjustment to the asphalt bid price.
- The Department is not responsible for assumptions and risks that the Contractors make in developing their bid prices.
- The Contractor was selective in the milling area chosen from which it intended to utilize the RAP in its mix design. As it turned out there were no composition reports for this area included in the contract.
- An average value alone is not a true representation of the character of the existing asphalt. A range of gradation and asphalt content must be considered in the evaluation of the RAP percentage, especially for this project having very wide ranges of compositions over the individual project segments.
- The Type S-1 asphalt mix submittal failed several times to meet VMA criteria.
- The limiting factor for the S-1 RAP percentage in the approved mix is the # 10 sieve.
- Time lost in the submittal process resulted from the number of resubmittals which did not correct the previous mix failures.

FINDINGS:

- Core information included in bid package was incomplete and was not reflective of those later obtained by the Contractor and Department.
- Meyers did not or was unable to incorporate the amount of RAP estimated in bid into the Job Mix Formula.
- FDOT additional information furnished dated 8/13/98.
 - Contractor Type S-I-R design - dated 10/23/97 with 10% RAP failed to meet specifications.
 - Also No. 200 sieve - job mix formula states 5.9% with asterisk - *Increased to reflect anticipated breakdown during production*. Mathematically this value would be 3.05%. RAP factor has already been applied to cored material.
 - Contractor Type S-I-R design - dated 11/17/87 with 10% RAP failed to meet specifications.
 - Also No. 200 sieve - job mix formula states 5.9% with asterisk - *Increased to reflect anticipated breakdown during production*. Mathematically this value would be 3.16%. RAP factor has already been applied to cored material.
 - Contractor Type S-I-R design - dated 12/9/97 with 25% RAP failed to meet specifications.
 - Also No. 200 sieve – was not increased as had been in previous submittals.
 - Contractor Type S-I-R design - dated 12/18/97 with 25% RAP was approved 12/22/97.
 - Also No. 200 sieve – was not increased.

DISPUTE REVIEW BOARD DECISION

- An approvable S-1 Recycle mix design is dependent not only on meeting gradation design ranges, but also on other contractually mandated criterion such as stability, volumetrics, etc.
- Meyer used the same gradations for materials in all mix designs submitted.
- Extractions furnished by Meyers of RAP milled from project match, within acceptable tolerances, the RAP gradations expected by Meyers in bidding as presented in Exhibit 16C.
- There was **no** FDOT **prebid composition** report that contained information about the source of milled material (M.P. 268.659 to M.P. 269.100 and M.P. 269.60 to M.P. 270.80) submitted for the S-1 Recycle design. This is true of all S-1 Recycle mix designs submitted from 10/23/97 through at least one of the mix designs dated 12/18/97. Subsequent to the initial submittal of 12/18/97, there are two approved mix designs for S-1 Recycle (QA 97-8584A (TS-1) both dated and signed:
 - Meyer Exhibit 15 (CORRECTED COPY # 2) specifies milled material from (M.P. 268.659 to M.P. 270.80) and excludes by footnote MP 269.10 to 269.60)
 - Meyers supplemental information provided 8/13/98 specifies milled material from (M.P. 259.349 to M.P. 271.491)
- There were only two FDOT prebid composition reports (000001 & 000005) that contained information **in the vicinity of the source of milled material** (M.P. 268.659 to M.P. 269.100 and M.P. 269.60 to M.P. 270.80) submitted for the S-1 Recycle design. These are identified as Zone "A" near the middle of the stationing and Zones "B" & "E" on the North end.

	Zone "A" North Bound Lane (2) M.P. 269.1 to M.P. 269.5		Zone "E" North Bound Passing Lane M.P. 270.8 to M.P. 271.4	
		"A & B"		"E"
	Range	Average		Average
AC	5.88-6.47%	6.25%		5.87%
1"	100	100.00%		100.00%
3/4"	100	100.00%		100.00%
1/2"	98-99	99.00%		99.00%
3/8"	96-97	96.00%		98.00%
No. 4	70-71	71.00%		71.00%
No. 10	51-53	52.00%		52.00%
No. 40	30-31	31.00%		30.00%
No. 80	12-13	13.00%		12.00%
No. 200	6.57-7.58	7.13%		6.57%

- Although it would not be without some risk assumption on the part of the Contractor, it might be reasonable to assume that the pavement composition in Zone 1-C would be reflected in Zones A, B & E.

- Indeed, subsequent to the bid, the FDOT furnished Pavement Composition reports, including one for Zone "1-C". (Meyer's Exhibit 11). This report lends credibility to such an assumption.

Zone "1-C" North Bound Travel & Passing Lanes M.P. 268.659 to M.P. 269.10 & M.P. 269.6 to M.P. 270.80			"1-C"
	Range	Average	
AC	5.9-6.5%	6.2%	
1"			
3/4"	100	100.00%	
1/2"	98-99	99.00%	
3/8"	96-98	97.00%	
No. 4	67-71	70.00%	
No. 10	46-53	51.00%	
No. 40	29-31	30.00%	
No. 80	12-13	13.00%	
No. 200	6.6-7.6	7.00%	

- Applying Meyer's RAP degradation factors to the approximate volumetric average of Zone's A, B & E.

RAP Material Gradations

	Zones		Volumetric RAP Average	RAP Factor	Resulting Meyers Bid Gradation Exhibit 16C	
	A&B	E				
AC	6.25%	5.87%	6.123%		6.123%	6.19%
1"	100.00%	100.00%	100.00%	1	100.00%	100.00%
3/4"	100.00%	100.00%	100.00%	1	100.00%	100.00%
1/2"	99.00%	99.00%	99.00%	1.03	100.00%	102.00%
3/8"	96.00%	98.00%	96.67%	1.06	100.00%	102.00%
No. 4	71.00%	71.00%	71.00%	1.16	82.36%	78.00%
No. 10	52.00%	52.00%	52.00%	1.24	64.48%	58.00%
No. 40	31.00%	30.00%	30.66%	1.27	38.94%	37.00%
No. 80	13.00%	12.00%	12.66%	1.49	18.87%	19.00%
No. 200	7.13%	6.57%	6.94%	1.84	12.77%	11.40%

- The Contractor used composition reports from Zone's A, B, C, D, E, and G in formulating the bid mix design (Exhibit 16C). The inclusion of zones distant from those from which the milled material is to be obtained is not reasonable.
- Average actual milled extraction gradations taken by Meyers from Zones 1-C, A, and B closely match RAP gradations from Meyers Exhibit 16C which is reported to be information used in bid.

RAP Material Gradations

	Zones				Average	Meyers Bid Exhibit 16C
	1-C	A	B			
AC	6.01%	6.04%	6.19%	6.05%	6.19%	
1"	100.00%	100.00%	100.00%	100.00%	100.00%	
3/4"	100.00%	100.00%	100.00%	100.00%	100.00%	
1/2"	98.96%	99.03%	100.00%	99.11%	102.00%	
3/8"	97.65%	97.44%	99.11%	97.71%	102.00%	
No. 4	80.23%	77.17%	76.76%	78.32%	78.00%	
No. 10	61.15%	57.02%	53.62%	58.25%	58.00%	
No. 40	37.89%	35.92%	38.06%	36.93%	37.00%	
No. 80	19.55%	18.81%	20.11%	19.24%	19.00%	
No. 200	12.32%	11.58%	11.46%	11.85%	11.40%	

- Meyer did not submit a design mix using the blend of aggregates shown in Exhibit 16C.

Conclusion:

- The inclusion of Pavement Composition Reports in the bidding documents forms a basis for the Contractor to base his bid. It is unreasonable for the various Contractors bidding the project to obtain this information independently.
- The Department has a duty to furnish reliable information. Had the Pavement Composition reports contained in the Contract Documents been sufficiently in error, the FDOT would be responsible for equitably adjusting the contract price.

Recommendation:

Based upon the Board's review of all documents presented by both parties to this dispute, and additional documents requested after the hearing, it is our unanimous opinion that the milled material encountered was surprisingly close to what the Contractor anticipated at bid time.

As to issue "A" the Board, therefore, finds in favor of the Department.

ISSUE "B":**Denial of time extension for time expended in acquiring Asphalt Mix Design approvals.**

C.A. Meyer believes that it is entitled to a contract time extension of 81 calendar days for the period October 14, 1997 thru January 2, 1998, "Due to the extensive amount of time lost while obtaining an approved Type S-I asphalt mix design ..." The Department has denied the time extension request because the actual alleged time lost was within the control of C.A. Meyer.

Department's Position:

- The Department and Contractor mutually agreed to a 73 day time suspension, from August 25, 1997 to November 5, 1997, during which the asphalt composition issues were investigated and resolved. The issue concerning pavement composition reports is not the reason for the delay in submitting the asphalt mix designs through to approval.
- The contract pavement composition reports are representative of the segment of the project where the test cores were taken. The original pavement composition reports for this project vary widely in gradation and asphalt content. Individual pavement compositions were prepared for the separate milling depths and different work zones in the contract. There is never a single or average composition report prepared to represent an entire project.
- Some additional Department cores were later found.
- Additional cores were taken by the Department in September 1997 as verification cores.

Contractor's Position:

C. A. Meyer is entitled to be granted sufficient time to recover that expended analyzing pavement compositions and defining zones where recycled asphalt material could best be obtained to compare with gradations used in bidding the project. Contract time should be granted for the following:

- Inaccurate pavement compositions in the Bidding/Contract Document resulting in time consuming reviews and studies.
- Time expended in resolving differences in the inaccuracies of Contract pavement compositions.
- Time expended selecting zones for obtaining RAP that would correlate with meeting percentages used in bidding the project.
- Time expended in abnormal amount of coring for design mix preparation.
- Time expended obtaining approved asphalt mix designs.

FINDINGS:

- Time required to verify pavement composition reports and obtain those not included in bidding documents delayed starting the project resulting in a 74 day time suspension (August 24, 1997 – November 5, 1997).
- First mix design was submitted during the time suspension on October 29, 1997.
- After submitting revised designs four (4) times, approval was given on submittal No. 4, December 22, 1997.
- The second mix design (Type S-III) was submitted January 20, 1998, and after four submittals the design was approved April 9, 1998.

submittals the design was approved April 9, 1998.

DISPUTE REVIEW BOARD DECISION

- The Contractor expended an inordinate amount of time and money coring the project in an attempt to locate RAP which would parallel or equal that used in bidding the project.
- The Special Provisions in Section 331-2.2.4 require the Contractor to cut ten 6-inch cores in area(s) approved by the Engineer. The Contractor exceeded this specification in attempting to solve the problem.

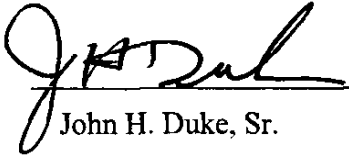
Recommendation:

Based upon the Board's review of all documents presented by both parties to this dispute, it is our unanimous opinion that the Contractor is entitled to recover excessive time and money expended in obtaining accurate core extractions.

As to Issue "B", the Board therefore finds in favor of the Contractor.

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.

Disputes Review Board



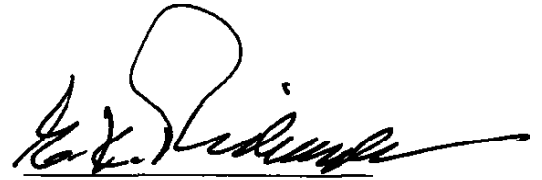
John H. Duke, Sr.

Chairman



Bobby D. Buser, P. E.

Member



Earl "Keith" Richardson, P.E.

Member

CC: Gary Geddes, P.E.