



Ohio Department of Transportation

1980 West Broad Street, P.O. Box 899, Columbus, Ohio 43216-0899

December 2, 2003

Dean Miller
Miller Brothers Construction, Inc.
1613 S. Defiance Street
P.O. Box 30
Archbold, OH 43502

**Re: ODOT Project 141(99) Lucas SR2 - Navarre Avenue
Dispute 02-0141(99)-02**

Dear Mr. Miller:

This letter represents the Deputy Directors Board's ruling on the above referenced dispute heard on October 22, 2003.

Background

This project widened and reconstructed 6.02 miles of SR-2 from Interstate 280 to the east corporation limit of the City of Oregon, including reconstruction of the bridge over I-280, replacement of the Wolf Creek Structure, and a new grade separation with the Norfolk Southern Railway. The work included a 0.82 mile relocation of Stadium Road, replacement of a trunk storm sewer along 0.25 mile of Earlwood Avenue, reconstruction of various local road intersections, replacement of five traffic signals, and new lighting from I-280 to Coy Road.

The pavement on SR2 experienced rutting shortly after placement by Miller Brothers Construction Company (MBCI). The rutting was at a number of project intersections. District 2 discussed the problem with pavement experts and provided two options to MBCI. Option One was full depth removal and replacement. Option Two was a four inch mill and replacement with new material. MBCI chose Option Two and performed the repairs. MBCI is now claiming that it met all contractual pavement requirements and requests payment for the repair work in the amount of \$267,609.79.

This dispute has risen to the Deputy Directors Board agenda via Proposal Note 025, Dispute Resolution and Administrative Claims Process.

After careful review of the submitted documents and due consideration of the testimony given at the hearing, the Board has reached the following decision on the above dispute:

Pavement Rutting

Award: -0-

Facts and Position of the Parties

This dispute concerns rutting of newly constructed asphalt concrete pavement. The parties are in agreement as to the timing and the extent of the rutting. The contractor repaired the rutting at agreed upon locations by an agreed upon method. The parties do not agree on the cause or responsibility for the rutting and the contractor is claiming reimbursement for the costs of the repair work.

Various testing of the asphalt concrete pavement was performed by the District once the rutting occurred. This included tests on cores taken from the rutted asphalt concrete pavement and dynaflect testing. The data from these tests was shared with the contractor.

The contractor's stated position in its written submittal to the Board is as follows: "Miller Bros. Const., Inc. (MBCI) contends that the rutting experienced at various intersections throughout the project was not the result of improper mix production or improper placement operations. Rather, MBCI proposes that there were other factors that contributed to the condition." MBCI goes on to identify these factors as: 1) Mix design parameters; 2) Soft subgrade; 3) Truck overloads. Each is briefly described. MBCI concludes its stated position with "It is not reasonable to expect MBCI to assume the costs of this repair. Because MBCI produced and placed a mix that was in reasonable

conformance to the specification and because outside factors impart immeasurable influences to the final product, MBCI should be granted full relief of associated costs to perform the directed repairs”.

The contractor advised the Board that it was no longer pursuing the issues of soft subgrade and truck overloads as potential causes of the rutting. The contractor’s claim thus became a single issue claim.

The contractor’s expert, Mr. Gerry Huber of The Heritage Research Group, reviewed production records and the test data from the cores taken from the rutted asphalt concrete pavement. Mr. Huber prepared a written report of his analysis and findings which was included in MBCI’s submittal to the Board. Mr. Huber also provided the following opinion at the hearing:

- The rutting encountered on the project is near the surface of the asphalt concrete pavement.
- The suspected cause of the rutting is high asphalt cement (AC) content and/or low air voids.
- AC contents of the cores taken from the rutted pavement are high and variable and do not match AC contents reported in the Quality Control (QC) and Quality Assurance (QA) data recorded at the time of production.
- Conclusions:
 1. The AC content data from the cores does not match the QC/QA production data and appears to be invalid.
 2. Based upon the Lot average of the production QC test results the

contractor produced an asphalt concrete mixture that is not variable.

3. The contractor produced an asphalt concrete mixture that met the specifications.
4. Rutting or other performance criteria are not requirements of the specifications.
5. The contractor should not be responsible for removal and replacement.

The District's position as stated in their submittal to the Board is as follows: "the design and mix used on this project was properly selected for the application and has been used successfully at many locations across Ohio". The District further stated that "the rutting occurred due to the result of improper mix production" and that "the rutting of the pavement is the responsibility of MBCI". The District concluded its stated position with "MBCI is not, should not, be entitled to any compensation with regard to this matter".

The District provided data, through documents and presentations, supporting the assertion that the asphalt concrete pavement was properly designed and that the specified asphalt concrete mix has been successfully used on many projects. The District also provided information concerning various deficiencies in the production of the asphalt concrete for this project. These deficiencies included wide variations in production Quality Control test results. The District also cited non-compliance issues with the asphalt plant that produced the material. The subject asphalt plant was subsequently removed from the Department's "approved" list. The contractor later renovated the asphalt plant and it has since been "approved".

The District's expert Mr. James Sherocman, PE, Consulting Engineer, also reviewed

production records and the test data from the cores taken from the rutted asphalt concrete pavement. Mr. Sherocman also prepared a report of his analysis and findings which the District included in its submittal to the Board. In his report and in his presentation to the Board, Mr. Sherocman discussed the variability of the asphalt concrete mix properties and an AC content significantly higher than that required by the job mix formula. Mr. Sherocman reviewed many of the production Quality Control test results with the Board emphasizing the wide variation in the results and the AC content. Mr. Sherocman concentrated on the differences in the results of individual tests rather than the Lot average of the results. Mr. Sherocman's conclusion was that the asphalt concrete mix was poorly controlled by the contractor and that too much AC in the mix caused the rutting.

Board Finding and Conclusion

The Board finds that the parties agree that the asphalt concrete pavement in question rutted because the asphalt concrete used to construct the pavement contained an excessive amount of asphalt cement. The Board finds that the District has provided clear and convincing evidence that the excessive amount of asphalt cement was the result of improper mix production which was under the direct control of the contractor. Therefore, the Board concludes that there is no entitlement for this issue.

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In Conclusion

Under the terms of the contract and Proposal Note 025 Dispute Resolution and Administrative Claims Process for project 69(02), you have the right to pursue a claim before the Director's Claim Board for claims over \$100,000 should you not accept the decision of the Deputy Directors Board. Your Notice of Intent to File a Claim must be received by myself within thirty (30) calendar days of completion of Step 3. Please contact me at (614) 387-1164 with any other procedural questions.

Respectfully,

Clint M. Bishop, P.E.
Secretary
Deputy Directors Board

copies sent via e-mail and post mail:

Deputy Directors Board: Bill Lindenbaum, Mark Kelsey, Gary Weinandy
District 2: Mike Gramza
Dispute File