



Professional Engineering Consultants, P.A.

September 7, 2004

Mr. Jim Stuit
Field Operations Superintendent
City of Lawrence
3rd and Indiana
Lawrence, KS 66044

RE: Evaluation of Bids received August 31, 2004
Trail Road Relief Sewer (PS #26 Removal) Utility Project #1SS-204
PEC Project No. 04A04-3975

Dear Jim:

We have received your request regarding a recommendation for acceptance of the low bid. Our review of the bids received is contained in the following paragraphs.

The construction cost estimate for this project contained in the City of Lawrence Wastewater Master Plan was \$178,500.00. A number of borings were conducted during the design which confirmed the presence of shale and limestone of varying thicknesses along the entire sanitary sewer route. In addition, a number of non-sewer items expanded during the plan review stage to include improvements to sidewalk ramps, sidewalks and streets rather than simple replacement. A preliminary cost estimate of \$293,782 was issued at 90% design. At the pre-bid conference, contractors expressed concern that the trench would be wider than the standard trench depicted on the plan and that the construction schedule was tight. We indicated that the City wanted to complete the project this fall. Immediately before the original August 17 bid date, the City Finance Department canceled the bid opening as written invitations had not been sent to contractors. The opening was postponed by two weeks to insure that more contractors were notified of the project. Preliminary indications we received from potential bidders were that the project would bid in the \$400,000 range, higher than the estimate which was already considerably higher than the initial budget for this project. You and I met on August 27 to discuss this development and the indication that only two bidders would have submitted bids. We agreed at that time to limit the engineer's estimate to the current \$300,000 range and review the bids after the bid opening with the possibility of rebidding the project early next year. The Engineer's Estimate was increased to \$303,544.00 at the time of bid. It was also noted that there is very little that could be modified in the design to reduce the cost of the project. The selected alignment already reflected the least disruptive route and rock would be a common problem with all potential routes. Removal of flowable mortar beneath the sidewalk west of Folks Road was discussed. This would reduce the bid quantity of flowable mortar by about 33%. As flowable mortar along this portion of the project had been requested by the City Engineer

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during design, no change was instituted. At the August 31, 2004, bid opening the City of Lawrence received bids ranging from \$395,088.05 to \$454,273.00 from six contractors.

After review of the bids, it is our analysis that the following factors contribute to the higher than expected bids:

- It is our opinion that the primary factor driving the cost of this project is the presence of limestone bedrock along the entire length of the relief sewer. This fact and the provisions to remove the excavated rock from the site and replace with either flowable mortar or imported borrow, depending upon location, was well documented in the plans and specifications. My quantities were based on the standard trench identified on the drawings which is based on the City standard and additional room for a trench box. In an attempt to control trench widths, we also indicated that flowable mortar would be paid at the plan quantity rather than the installed quantity. Payment by the amount installed provides no incentive for a contractor to control his trench width. His bid would be evaluated based on the unit price for the stated quantity and he would be paid for any over run in quantity at the unit price. However, payment at the plan quantity requires the contractor to include the cost for any over run he anticipates, if any, in other bid items. This over run would be considerably less if the contractor controls his trench than if he does not. This issue was mentioned by the contractors at the pre-bid conference. The practical implication is that the contractors believe they will have a wider trench, more rock to remove and dispose of, and more flowable fill than indicated by the design trench. These anticipated additional quantities are not paid for directly but are included in the overall bid for sewer pipe, manholes, and flowable mortar.
- The time frame and the neighborhood are also factors which may have contributed to the higher bids. The general perception we have gotten from contractors is that they have moderate to good workloads going into the fall. This project has a relatively short time frame which would need to be inserted into the schedules of their other work. As this is a relatively new, well-maintained neighborhood, there are also intangibles that contractors reflect in their bids such as perceived risk and potential "extras" to keep the neighbors happy and satisfactorily restore the area. Perceived risk manifests itself in a variety of potential ways from the rock being more difficult to remove to potential damage from vibration to being slowed by traffic, maintaining access, and confined work areas.
- The restoration construction items also ran higher than expected and showed the greatest variance among contractors. We have been seeing a general escalation in fuel and materials costs such as reinforcing steel, concrete, and asphalt prices this summer that are now being reflected in bids. This fact and the piecemeal nature of the reconstruction as the project progresses are factors reflected in these items.

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All of the bids submitted were within 15% of each other which is an indication that the bidders have a similar perception of the work to be performed and that their bids legitimately reflect the cost to construct the project as designed. There is some potential that rebidding the project in the spring with a more flexible construction time frame and when contractors have more open schedules may result in somewhat lower bids. The fact that we received six bids, as opposed to the two we originally expected, reduces the likelihood that rebidding will result in bids that are significantly lower. The additional rock excavation, rock disposal, and flowable mortar will remain the primary bid issues which we would not expect to change materially.

At the bid opening Meadows Construction Company, Inc., was the apparent low bidder at \$395,088.05. The next lowest bid was \$398,089.00 submitted by Kansas Heavy Construction, LLC. Both bidders submitted a listing of similar projects completed. Meadows submitted a listing of sanitary sewer, storm sewer and street projects. Kansas Heavy Construction submitted a listing consisting of only street projects. As we indicated in the August 31, 2004, transmittal of the bid tabulation, there is an irregularity in the Meadows Construction Company, Inc., bid in the form of a computational error on the extension of line item No. 8. The extension of 588 cubic yards of flowable mortar at \$114.90 is \$67,561.20 rather than the \$64,114.20 that Meadows indicated on the bid form. Upon notification of the error, Meadows verbally agreed to honor the total bid price they submitted. We recommend waiver of the computational irregularity and, based on the lowest total bid price submitted, award to Meadows Construction Company in the amount of their total bid of \$395,088.05, subject to concurrence by the City.

Please contact me if you have any questions regarding this matter.

Sincerely,
Professional Engineering Consultants, P.A.



Rodney J. Hofer, P.E.
Project Manager

RJH/ljc