

Dreambuilder

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Civil Engineering Construction

February 13, 2014

Department of Transportation
Office Engineer, MS 43
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Attn: Office Engineer

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Via: Fax and U.S. Mail [registered]

Re: Replace Culvert with Ramming 108" Steel Casing. – Contract No. 04-3G7404

Bid Protest Letter # 2

Subject: Dreambuilder's Bid Protest Regarding the Department's Notice of Intent to Award the Project to Drill Tech Drilling & Shoring, Inc. (DTDSI)

Dear Sir / Madam:

As part of its previously submitted Bid Protest #-1 to the Drill Tech Drilling and Shoring, Inc. bid on this Project, Dreambuilder is submitting additional basis for the rejection of the Drill Tech bid. We have determined that Drill Tech's intended methods violate the US Corps of Engineers permits and are non-responsive to the explicit requirements of the contract. It is our belief that the State will end up with a pipe thickness that is 40% less than specified, resulting in less pipe strength and a dramatically reduced lifespan due to the inevitable and constant corrosion in this saline, marine environment.

These are material variances from the bid specification. These provisions cannot be waived without rendering the award invalid as they are the basis for the other bidder's prices and allowing Drill Tech to violate the specifications renders the competitive bidding process completely in-effective to achieve the lowest, responsible price. For each of these reasons, Drill Tech's bid must be rejected and the project awarded to the second bidder.

Introduction

On January 28, 2014, the Department opened bids for this Contract and determined that Drill Tech was the apparent low bidder. SGC Piling Systems, (SCCI) a subcontractor of Dreambuilder, called DTDSI to inquire how it achieved the low bid and was told that DTDSI intended to use alternative methods and materials that were not specified in the Request for Bids (RFB).

The Department requires that bidders agree "to perform the work provided in the Contract under the terms of the Contract." DTDSI affixed its signature to that condition in its bid. This contract is to "Replace Culvert with Ramming 108" Steel Casing," and the specifications set forth corresponding methods and materials. But DTDSI did not follow them; it prepared its bid assuming it could jack the pipe instead of ramming. DTDSI's bid is therefore non-responsive and in these circumstances cannot be accepted.

The Department cannot waive this variance because other bidders reasonably believed such a bid would not be accepted, and because DTDSI's nonconforming installation method will violate the permits the Department obtained by the project.

Despite the low face value of this bid that appears to benefit the Department, the money in DTDSI's bid and fifty-percent performance bond will be insufficient to complete the work in conformance with the Department requirements. Finally, the nonconforming method proposed by DTDSI is more likely to result in complications, which the Department presumably intended to avoid by electing to pay a premium for the ramming method.

2. Drill Tech's nonconforming method violates the US Corps of Engineers Permit.

The Department cannot allow DTDSI to proceed using the jacking method because it is not allowed by the permits the Department obtained for the project. The permit from the U.S. Army Corps of Engineers was based upon the methods described in the Department's application.

The Army Corps' summary of the project that it approved included a description that "[t]he pipe will be installed via trenchless method of pipe ramming. The method uses pneumatic percussive blows to drive the pipe into the ground similar to pile driving." U.S. Army Corps of Engineers, Non-Reporting Nationwide 404, p.1. The permit requires that "[i]f there are any changes in the project . . . construction methods prior to construction, those modifications must be approved by the Corps in writing." *Id.* at p.3.

For DTDSI to proceed with its nonconforming methods, each of the permits would need to be re-submitted. Approval of all of the affected permits is unlikely to occur within the timeframe planned for this project.

Presumably each of the permits obtained by the Department were obtained by regulatory agency review of the same materials reviewed by the Army Corps, and the approvals are conditioned on those methods.

For example, the Sonoma County permit, on which the Coastal Commission permit requirement was approved, stated that any alteration to the use described by the Department's application "shall require [] prior review and approval" The change in approach may change the mitigation required for the project. DTDSI planned jacking method requires a large reaction frame positioned on the receiving slope to jack against, which is a difference in the method that was likely not accounted for in obtaining permits. The Regional Water Quality Control Board permit relied upon the Department's estimate that "temporary impacts to waters of

the U.S. would total 312 ft²". A change in the construction method will require a detailed evaluation, and perhaps new permits.

The permitting for this project was clearly based upon an installation method that had been carefully evaluated and approved by multiple agencies. Ramming has significant advantages over jacking in this application, as described below. The judgment of the Department's engineer should be respected.

3. DTDSI's method does not conform to the specifications.

The contract requires "furnishing and installing a 108-inch steel casing pipe by pipe ramming as shown." SP §70-9.01A. The provided pipe must have "a minimum wall thickness of 1.25 inches". SP §70-901C.

DTDSI's Vice-President told SCCI that it intends to supply a thinner walled pipe installed with jacking. DTDSI believed the Department's answer to their bidder's inquiries dated January 13, 2014 waived the specified ramming specification. Bidder inquiries, of course, do not waive the contract requirements unless an addendum is issued.

4. Pipe jacking is inferior to the specified ramming method for this application

Pipe jacking is a casing installation method that has been used in trenchless installations for many years. Predominantly used in soft to medium soils, it has its limitations in denser heavier soils. In heavier, denser soils the pipe jacking system is typically used in combination with a horizontal auger drilling machine, also referred to jack-and-boring. It is understood that jack-and-boring was considered as a possible installation method for the project but was discarded due to the fact that on previous installation performed under Highway 1 large boulders were encountered, making augering impossible.

This experience is apparent in the specifications wherein the contractor is advised to assume that large boulders may be encountered during the casing installation, in size up to 30% of the diameter of the casing. Jacking under those conditions could cause a catastrophic roadway failure. Jack and boring is impossible here because of the large boulders anticipated and the existing culvert is to be engulfed.

SCCI's Geo-technical Engineer Mr. Armin Stuedlein, PhD, P.E., who analyzed the Department's design and performed a drive-ability analysis for SCCI to prepare its sub-bid, concurs with the Department engineer's judgment and is concerned by the non-conforming use of jacking here. In the event the jacked casing method suggested by DTDSI would encounter a boulder, it is his belief that the boulder could be jacked through the soil causing a calamity by dragging a void in the embankment that may create a collapse of the roadway, which would be disastrous.

This dragging will occur in part because static jacking does not provide the real-time feedback of dynamic ramming; a boulder could be dragged for several feet before detection. Second, the jacking method will not be able to handle boulders, if at all, except by pushing them through the ground leaving voids.

It will have to handle obstructions by removing them manually. In contrast, the operator of SCCI's horizontal pipe driving system can detect obstructions and the ramming equipment has a heavy reinforced cutting shoe to break up boulders of the mean compressive strengths anticipated by the Department due to the percussive action of the HPD driver.

SCCI's horizontal pipe driving system can also be calibrated and monitored, particularly while exiting the receiving slope, to maintain slope stability. SCCI's Geotechnical Engineer calculates the size of the HPD system required to ensure a successful installation. The analysis also predicts the maximum energy required, blow counts per foot and duration of the installation. This information can be referenced by the equipment operator to maintain driving at just the theoretical level needed to ensure a controlled completion of the drive and exit of the end of the casing out of the receiving slope.

In addition to using an inferior method, DTDSI intends to provide a thinner wall pipe. SCCI understands that as a result of DTDSI using a jacking method they felt they did not need the heavy 1-1/4-inch wall that was specified, and they could use a casing that would be half the thickness and cost of the specified casing. The project is in an environment that is very saline aggressive. The casing specified because of its thickness has a service life at least twice of what DTDSI is planning to provide to CalTrans, thus providing an inferior end product compared to the product that was specified.

Finally, the method proposed by DTDSI is inferior because jacking a 108-inch casing is untested in these predicted soil conditions. It would not be a good choice for the soil conditions indicated by the bid documents for the reasons described here. The Department clearly specified a robust method to handle complex soil conditions without severe disruptions if the expected conditions are encountered. Drill Tech's jacking proposal is inferior, nonconforming, and should not be accepted.

5. A non-conforming bid is non-responsive and must be rejected when the nonconformity is material.

A bid is responsive if it promises to do what the bidding instructions demand. *Taylor Bus Service, Inc. v. San Diego Bd. of Education* (1987) 195 Cal. App. 3d 1331, 1341. The Department exercised its business, engineering, and governmental judgment in defining the requirements for the work. Conformance to these predetermined, objective bid requirements is necessary for a bid to be responsive. *Id.* at 1342. When the Department inquires about DTDSI's bid preparation, it will find that the bid does not do what the bidding instructions demand and is thus non-responsive.

The Department should inquire into DTDSI's bid because the unit price for ramming is implausibly low.

The Department's guidance to its staff in evaluating bids requires that the Department analyze "the differences between the bid items and the Engineer's Estimate." Department of Transportation, RTL Guide, § 14 District Recommendation for Award, § 14.4 (January, 2014).

The Department Engineer's Estimate was \$1,485,911.40. DTDSI's total bid is \$1,180,771.00. This is 79% of the bid amount. It does not quite trigger the "Special Bid Situation" of 25 percent or more below the Engineer's Estimate in the Ready to List Guide. RTL Guide, p. 14-5. But the unit price on the individual bid item in question is severe. Bid item 32 was bid at \$5,194.00 per LF. This is sixty-five percent of the second and third low bids and forty-three percent of the fourth low bid.

This is sufficient to put the Department on notice that the amount of the bid may be inadequate to complete the work. In other words, it raises "reasonable doubt that award to the bidder . . . will result in the lowest ultimate cost to the Government." Caltrans RTL Guide p.14-3 (January 2014). The Department will be at a disadvantage if it accepts Drill Tech's bid and the subsurface conditions anticipated by the Department are encountered.

In addition to the inference of nonconforming methods from the line item price, direct evidence is provided by DTDSI's statement to SCCI that Drill Tech prepared its plan using methods and materials other than required by the bid documents.

6. The Department does not have the discretion to waive the irregularity in DTDSI's bid.

A bid which "is not strictly responsive [may] be accepted if the variance cannot have affected the amount of the bid or given a bidder an advantage or benefit not allowed other bidders or, in other words, if the variance is inconsequential." *Ghilotti Construction Co. v. City of Richmond* (1996) 45 Cal. App. 4th 897, 904. "The test for measuring whether a deviation in a bid is sufficiently material to destroy its competitive character is whether the variation affects the amount of the bid by giving the bidder an advantage or benefit not enjoyed by the other bidders." *Id.*

Permitting DTDSI's to base its bid on inferior materials and nonconforming methods would give it an unfair advantage. The Department did not seek out competitive bids for the jacking method of installation, so if the Department accepts DTDSI's bid it will likely not be receiving the most competitive price for work with that method.

The Department specified ramming as a method. No one needs to explain to Department engineers that there are alternative methods to install a culvert. The Department's engineers are familiar with various techniques for installing culverts. The engineers evaluated this project and specified ramming. They did not specify cut and cover or jacking. The ramming method was repeatedly specified and any other method will violate the permits. There was no reason for bidders to believe that the Department would accept other proposals.

An implicit benefit to the specified approach is that the Department selected a robust method that it determined was likely to be successful. Despite the existence of obvious alternatives, the Department, planning a project in an environmentally sensitive area on a road adverse to closures, specified a robust installation method that could be completed in a narrow time window.

The ramming method runs minimal risk of change orders or differing site conditions that would be more likely to hinder less robust methods. The ramming method has a lower risk of the contractor abandoning the approach and resorting to cut and cover or other alternatives less suited for this site and these circumstances.

7. Conclusion

DTDSI's bid is defective because it violates the permits necessary to perform the work and is materially non-responsive. For these reasons, the bid must be rejected. As such, the Project should be awarded to Dreambuilder as the low, responsive, responsible bidder.

Please contact me if you have any questions or need anything else regarding Dreambuilder's bid protest. Thank you for your continued consideration.

Sincerely,



Alex Singh
Project Coordinator.

Cc: Robert Verkyk, SCCI