BEFORE THE ALASKA OFFICE OF ADMINISTRATIVE HEARINGS ON REFERRAL FROM THE COMMISSIONER OF TRANSPORTATION & PUBLIC FACILITIES

In the Matter of	)	
	)	
GRANITE CONSTRUCTION	)	OAH No. 17-0472-PRO
COMPANY v. DOT&PF CENTRAL	)	Agency No. 3-02-0016-181-2017
REGION CONSTRUCTION	)	
	)	

DECISION

I. Introduction

Quality Asphalt Paving, a construction firm in Anchorage, was awarded a contract to repave a taxiway at the Anchorage International Airport. The disappointed bidder, Granite Construction Company, protested the award to Quality Asphalt. Granite argued that Quality Asphalt's bid was not responsive because Quality Asphalt had frontloaded its bid. Granite pointed out that Quality Asphalt's bid had excessive charges for two items that would occur early in the project, while undercharging for items that would occur later. In evaluating Granite's protest, the procurement officer agreed that the frontloading made Quality Asphalt's bid "unbalanced." He found, however, that the bid was responsive to the invitation to bid because the lack of balance did not meet the criteria specified in the invitation for when an unbalanced bid would be deemed nonresponsive.

Granite appealed, and the parties agreed that the issues on appeal could be decided on the record without an evidentiary hearing. Although Granite has many good arguments that frontloading a bid is not good practice, under the standards contained in this invitation to bid, some frontloading is allowed. Frontloading will make a bid nonresponsive only if the bid is *materially* unbalanced. To meet that requirement, the bid must be tantamount to a significant advance payment or raises a reasonable doubt that the bid might not be the low bid. In the circumstances of this bid, where the frontloaded payments were not extremely high value, and the work will be performed under a short and uninterrupted schedule, the procurement officer's decision was reasonable. Central Region's decision that Quality Asphalt's bid was responsive is affirmed.

II. Facts

On March 3, 2017, the Central Region of the Department of Transportation and Public Facilities issued an invitation to bid (ITB) on a runway reconstruction project for the Anchorage International Airport. The project included:

- Cold planing and milling of existing Taxiway Y (a process of removing existing asphalt and leveling and smoothing the resulting surface).
- Installing crushed aggregate base.
- Repaving with hot mix asphalt.
- Replacing and rehabilitating storm drains.
- Upgrading the taxiway's edge and centerline lighting.[1]

The timelines for the project were tight—it had to be completed no later than October 15 to minimize airport disruption and ensure completion within the construction season.[2]

Central Region generally ballparked the cost of the project between $20,000,000 to $30,000,000.[3] Central Region's engineer's estimate of cost, based on estimated quantities of materials and prices, was $28,019,350 dollars.[4]

Under the ITB, all the bids were to be based on the estimated units and material quantities contained in the engineer's estimate so that all bids would be on an apples-to-apples basis. These quantities, however, might not be the actual quantities used in the project. Payment for unit price items would be based on actual quantities used.[5] Payment for lump sum items would be as specified in the bid. As will be seen, this structure could lead to bidders attempting to capitalize on mismatches between their own estimates and the engineer's estimates of the unit quantities that will be required to complete the job.

Two firms, Quality Asphalt Paving, and Granite Construction Company, submitted bids. Both bids were considerably lower than the engineer's estimate. Quality Asphalt was the low bidder at $18,592,071.76.[6] Granite Construction bid $20,374,608.33.[7]

Aaron Hughes, an engineer with Central Region, and the project manager for the taxiway reconstruction, did an analysis to ensure that Quality Asphalt's bid was responsive to the ITB. Mr. Hughes flagged one issue: Quality Asphalt's bid was unbalanced, meaning that the amount bid for some of the items was too low, while some other items were bid high to compensate for the underbid.[8] This mismatch is referred to as a "mathematically unbalanced bid," a term that is

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1 Granite Exhibit B at 1.
2 *Id.*
3 *Id.*
4 Granite Exhibit C.
5 Granite Exhibit G at 1.
6 Granite Exhibit C.
7 *Id.*
8 Granite Exhibit D.

defined in the ITB as "[a] bid (a) where each pay item fails to carry its share of the cost of the work plus the bidder's overhead and profit, or (b) based on nominal prices for some pay items and enhanced prices for other pay items."[9] Here, Mr. Hughes was able to determine that three major items, each at least 10 percent of the bid, were unbalanced:

- Mobilization and demobilization (a lump-sum item, 60 percent of which would be payable in the first disbursement period). Quality Asphalt's bid was 260 percent more than the engineer's estimate.
- Pavement cold planing (an item that would be payable early in the project). Quality Asphalt's bid was 233 percent more than the engineer's estimate.
- Hot mix asphalt plus tack coat (unit price items that would occur later in the project). Quality Asphalt's bid was 74 percent less than the engineer's estimate.[10]

He also determined that four other minor items were unbalanced.[11]

Under the ITB, a mathematically unbalanced bid would be deemed nonresponsive if it was "materially unbalanced."[12] A materially unbalanced bid is "[a] mathematically unbalanced bid that either (a) gives rise to a reasonable doubt that it will ultimately result in the lowest overall cost to the Department, even though it may be the lowest bid or (b) is so unbalanced as to be tantamount to allowing a significant advance payment."[13]

In analyzing the unbalanced items, Mr. Hughes concluded that the lack of balance did not "give rise to a reasonable doubt that it will ultimately result in the lowest overall cost to the Department" nor was it "so unbalanced as to be tantamount to allowing significant advance payment."[14] Although Mr. Hughes used the wrong terminology (applying the standard for a mathematically unbalanced bid to what he called "materially unbalanced"), his discussion indicates he determined that the bid was not "materially unbalanced."[15] Mr. Hughes determined that Quality Asphalt's bid was responsive, and recommended that the contract be awarded to the low bidder.[16]

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[9] Granite Exhibit H at 6. This exhibit is Section 10 of the contract, the "Definitions and Terms."
[10] Granite Exhibit D.
[11] *Id.* at 3.
[12] Granite Exhibit G at 3.
[13] Granite Exhibit H at 5.
[14] *Id.*
[15] *Id.* at 2.
[16] *Id.*

Shortly after Mr. Hughes completed his analysis, Procurement Officer Thomas Dougherty spoke on the telephone with Todd Porter, the General Manager of Quality Asphalt.[17] Mr. Dougherty asked Mr. Porter "what was going on with [your] bid for Taxiway Y?"[18] Mr. Porter explained that Quality Asphalt's estimator had determined that the actual quantity of hot mix asphalt needed for the project would be substantially lower than the amount estimated by Central Region's engineer. Accordingly, Quality Asphalt "undervalued" the hot mix asphalt unit price, and overvalued the mobilization/demobilization cost, as well as other lump-sum costs.[19]

Mr. Hughes then asked Central Region's consultant to review the hot mix asphalt quantity calculations contained in the bid. The consultant confirmed the original engineer's estimate.[20]

Central Region issued a Notice of Intent to Award on April 3, 2017.[21] Granite filed a protest on April 12, 2017, arguing that Quality Asphalt's bid was nonresponsive because, in Granite's view, the bid was materially unbalanced. Granite requested that the procurement officer issue a stay.[22]

Procurement Officer Thomas Dougherty issued a decision denying the protest on April 27, 2017. Mr. Dougherty explained his view that Quality Asphalt's bid – although mathematically unbalanced – was not "materially unbalanced.[23] Mr. Dougherty found that the award to Quality Asphalt was in the state's best interest.[24]

Granite filed its appeal to the Commissioner later the same day. In addition to requesting an expedited review, Granite again requested that the Commissioner stay the award while its appeal is considered. The appeal was referred to the Office of Administrative Hearings. The stay was denied on May 2. The parties then agreed that the issues raised in the appeal could be decided based on the record, with no need for an evidentiary hearing. Briefing was completed on July 12, 2017.

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[17] Granite Exhibit O.
[18] *Id.*
[19] *Id.*
[20] *Id.*
[21] Granite Exhibit A.
[22] Exhibit 1 to Granite's Appeal at 13-25.
[23] Granite Exhibit Q at 3-8.
[24] *Id.* at 10-11.

III. Discussion

A. What are the standards that will be employed in this appeal?

Under §20-06(5) of the specifications in the ITB, "[a] bid shall be rejected as nonresponsive if it: . . . (5) [i]s materially unbalanced."[25] Merely being mathematically unbalanced, however, would not make a bid nonresponsive under §20.06.

Yet, as the ITB's unit structure, and definition of "mathematically unbalanced bid" make clear, the Department of Transportation and Public Facilities has a preference for bids with accurate unit costs. A bid that underprices some units and makes up for that underpricing by overpricing other units is unbalanced. An unbalanced bid reflects negatively on the competitive bidding process. It creates a perception that parties are not bidding on the same contract or that one party may have inside information regarding the actual quantities of materials that will be needed on the project.[26] Further, an unbalanced bid raises concerns that a contractor might be undercapitalized (creating a need to have more money paid upfront) or have skewed incentives to underprovide those materials on which it underbid.[27] In short, an unbalanced bid creates risk for the Department, and the Department's specifications let contractors know that a mathematically unbalanced bid will become an issue that requires further analysis.

A lack of balance, however, does not always have to be fatal to the bid.[28] Contractors are expected to use their skill and knowledge in making bids, and in exercising that judgment the contractor might unbalance the bid (which could result in a lower overall cost for the state even while the contractor increases its expected profit). Therefore, bidders are given some leeway, and a mathematically unbalanced bid will be rejected only when it is materially unbalanced. As stated above, material unbalance is only found where the mathematical unbalance is tantamount to a

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[25] Granite Exhibit G at 3.

[26] *See, e.g., In re Barnard-Slurry Walls, J.V.,* B-274973 (Comp. Gen'l January 15, 1997) (explaining that "where during performance the bidder will receive payments based on inflated prices for bid items for which it will receive payment early in the performance of the contract, there is a legitimate concern that the bidder has received an improper competitive advantage" and that "by receiving early payments which exceed the value of work performed, the contractor will have a reduced incentive to properly complete the work"); *available at* https://www.gao.gov/legal/appropriations-law-decisions/search. All decisions of the Comptroller General cited in this decision can be found through the search mechanism at this site. Note that this decision will cite extensively to decisions of the Comptroller General because both parties rely on those decisions, which contain the most thorough examination of the concepts of mathematical and material unbalance. Decisions of the Comptroller General on the issue of responsiveness have been cited as guidance in previous procurement cases. *See, e.g., Quality Sales Foodservice v. Dep't of Corrections,* OAH No. 06-0400-PRO at 13 (Dep't of Admin. 2006) *available at* http://aws.state.ak.us/officeofadminhearings/Documents/PRO/PRO060400.pdf.

[27] *Barnard-Slurry Walls,* B-274973.

[28] Granite Exhibit G at 3.

significant advance payment or gives rise to reasonable doubt that the bid will not end up being the low bid.

Thus, the focus of the analysis is not on the fact that Quality Asphalt unbalanced its bid. The focus is on the effect of the lack of balance on the overall cost to the agency and on whether the unbalancing results in payment in advance of work being performed. This analysis necessarily requires use of judgment and expertise. The terms used in making the materially unbalanced decision—"reasonable doubt" and "so unbalanced"—are not precise. They inherently require exercise of judgment.

Here, the initial decisionmaker in this case was the procurement officer. The procurement officer is a Professional Engineer who is familiar with the project.[29] The cases allow me to give some deference to the procurement officer's decision on a protest.[30] In reviewing the procurement officer's exercise of judgment, I will give deference to the procurement officer's decision where the written decision includes an understandable and reasonable explanation for the basis for the decision. Where the decision does not offer an explanation, or where the explanation is not reasonable, no deference will be given.

B. What arguments have the parties made?

Granite asserts that the procurement officer's decision must be reversed for four reasons. First, Granite argues that Quality Asphalt's frontloading of its bid will result in a significant advance payment. Second, Granite argues that Quality Asphalt's frontloading of its bid raises reasonable doubt about whether the bid will, in fact, be the low bid. Third, it asserts that the agency erred by drawing inferences about Quality Asphalt's actual business reasons for unbalancing its bid. Fourth, citing a recent decision by a Central Region procurement officer in a different case that found a bid to be materially unbalanced, Granite argues that the procurement officer in this case committed reversible error by not following DOT precedent.

In response, Central Region concedes that Quality Asphalt's bid is frontloaded. In comparison with the cases that have found frontloaded bids to be materially unbalanced, however, Central Region asserts that Quality Asphalt's bid does not meet the threshold established in those

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[29] Granite Exhibit Q at 12.

[30] *Davis Wright Tremaine LLC v. Dep't of Law,* OAH No. 11-0377-PRO at 2 (Dep't of Admin. 2011), *available at* http://aws.state.ak.us/officeofadminhearings/Documents/PRO/PRO110377.pdf. Deference is not mandatory, and will only be given "[w]here the procurement official's decision on a protest was based on an essentially sound understanding of the facts and fell within the range of discretion allowed by law." *Id.* (quoting *Quality Food,* OAH No. 06-0400-PRO).

cases of being "many multiples" higher than the value received. With regard to the possibility that under certain circumstances Quality Asphalt's bid could end up not being the low bid, Central Region argues those circumstances are too remote to be given credence. As for the project manager's and procurement officer's inferences regarding Quality Asphalt's business particulars, to the extent that any error was made, Central Region considers those errors harmless because they reached the correct decision without regard to Quality Asphalt's business reasons for unbalancing its bid. Finally, Central Region asserts that the decision on appeal here is consistent with its prior decision, even though the outcome of that decision found the bid in that matter to be materially unbalanced.

In addressing Granite's arguments, I will start with the question of whether the agency officials erred by drawing inferences about Quality Asphalt's business reasons for unbalancing its bid. Although this issue is not the primary focus of Granite's case, the analysis made by the two engineers who first considered the issue of the lack of balance is informative. Discussing this analysis first will help in understanding when a bid is materially unbalanced. This analysis will then be useful when addressing the issue of whether Quality Asphalt's bid is materially unbalanced.

C. Did the project manager and the procurement officer wrongly make inferences about Quality Asphalt's business purposes for unbalancing its bid?

In arguing that Central Region erred by citing to Quality Asphalt's business reasons for unbalancing its bid, Granite cites to a federal procurement decision by the Comptroller General called *In re Crown Laundry*.[31] In that case, the respondent had tried to defend its unbalanced bid with reference to its business particulars, including its need to purchase new equipment. The Comptroller General refused to consider this argument, noting that its decisions have "consistently declined to look behind a bid to ascertain the business judgments that went into its preparation." In Granite's view, both the project manager and the procurement officer violated this principle because each either made inferences about or considered the actual business practice of Quality Asphalt.

Granite points to the following examples of the project manager and procurement officer citing to Quality Asphalt's business particulars:

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[31] B-208795 (Comp. Gen'l, April 22, 1983).

- Mr. Hughes's March 28, 2017, memorandum stating that "it appears QAP may have included a portion of the [hot mix asphalt] costs into other pay items such as the G-100 Mobilization and Demobilization and P-162a Pavement Cold Planing."[32]
- The statement in the same memorandum that "[t]he initial costs may be needed to set up the asphalt plant and obtain the asphalt binder."[33]
- Mr. Hughes's telephone conversation on March 31 with Quality Asphalt, confirming that Quality Asphalt did deliberately unbalance its bid to underprice hot mix asphalt and overvalue mobilization and other lump sum items.[34]
- Mr. Dougherty's analysis in the protest denial that cold planing of the existing taxiway surface could occur in stages rather than all at once in the first pay increment of the contract.[35]
- Mr. Dougherty's analysis in the protest report, confirming that Quality Asphalt "intends to do cold planing and hot asphalt paving concurrently over at least a six-week period."[36]

Although Granite has correctly cited a legal principle that applies to the analysis of whether a bid is materially unbalanced, Granite has not correctly interpreted the project manager's or the procurement officer's application of the principle. In this regard, a federal case that helps explain why we have this principle, and how to apply it, is *In re Barnard-Slurry Walls*.[37] In *Barnard,* a bidder attempted to explain why it frontloaded its bid to construct a levee by putting nearly all costs under "preparatory work." Its argument was that it had a unique and innovative approach to levee building, so that nearly all the work would be done once the prep was done. Therefore, in its view, the bid was not mathematically unbalanced (much less materially unbalanced) because no unit item was under- or overpriced.[38]

The Comptroller General, however, explained that the bidder's business purpose was not relevant: "Whatever business reasons are offered to justify a particular bid, the government may

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32 Granite Exhibit D at 3.
33 *Id.*
34 Granite Exhibit O.
35 Granite Exhibit Q at 7.
36 Granite Exhibit S at 5.
37 B-274973 (Comptroller General, Jan. 15, 1997).
38 *Id.*

not pay more for an item or service than its reasonable value."[39] Because the reasonable value of preparatory work on a levee construction project was many multiples less than the bid by the respondent, the bid was both mathematically and materially unbalanced.[40]

This tells us that the balance inquiry focuses on reasonable costs for each unit item, not the actual cost. For example, to use a hypothetical, if Quality Asphalt had tried to argue that it had exceptionally high mobilization costs because its equipment had to be moved in from a remote location, that would not be relevant. We do not care about Quality Asphalt's actual mobilization expenses. We do, however, care about reasonable mobilization expenses, and an engineer procurement officer is allowed to use his or her judgment and experience in construction projects to place brackets around a range of reasonable expenses. In determining reasonable mobilization costs for a paving project, for example, an engineer is permitted to observe that a possible reasonable cost could include setting up an asphalt plant and obtaining binder. Similarly, in a pavement rehabilitation project like this one, an engineer not only is permitted to, but must, consider that within a short time of the onset of the project, paving could occur shortly after cold planing or simultaneously with some of the cold planing. Whether Quality Asphalt would *actually* complete all cold planing before paving or do some of the later planing simultaneously with paving is immaterial. The agency, however, must consider the range of reasonable approaches before it determines that a particular bid is unbalanced.

In its Reply Brief, Granite presents actual information about Quality Asphalt's progress with the project, and argues that Central Region's argument should be rejected because it is not based on actual sworn testimony of Quality Asphalt's business plan.[41] That argument is incorrect, and is directly contrary to Granite's claim that the procurement officer and project manager erred by considering actual business information. As shown in *Barnard,* the engineers here are required to use their knowledge and experience to consider reasonable approaches, and reject an outlier approach that results in an advance payment.[42] Thus, if testimony were to be received, it

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[39] *Id.; see also In re Technology Applications, Inc*. B-236790 (Comp. Gen'l Jan 10, 1990) (fact that protestor would purchase large inventory of spare parts during mobilization period did not justify high mobilization costs because "the Navy has never argued that such substantial advance purchases of replacement parts were reasonable and necessary").

[40] *Barnard-Slurry Walls*, B-274973.

[41] Reply Brief at 3 and Thurman Aff.

[42] *Barnard-Slurry Walls*, B-274973. In *Barnard,* the bidder attempted to justify its frontloaded bid by recharacterizing substantive work on the project as preparatory work based on how it intended to construct the levee. Regardless of how the bidder would actually perform the project, however, if the work bid under a particular unit is not a reasonable fit for that unit, the bid is unbalanced.

would not be about Quality Asphalt's actual approach—it would be about the range of reasonable approaches. Because the parties have asked for a decision based on the record, I can consider all evidence in the record with regard to whether the procurement officer's decision was reasonable.[43]

To the extent that an engineer obtains information about actual expenses, and compares that information to his or her estimate of reasonable expenses, use of information is not necessarily error. Information is an engineer's stock in trade, so the question is not whether an engineer has information, the question is what use the engineer has made of that information. Here, in carefully analyzing the project manager's and procurement officer's use of information and analysis of expenses, I see nothing that indicates that either official was attempting to excuse Quality Asphalt's unusually high price for mobilization and cold planing with reference to a peculiar or unique business practice. Each analysis appears to be based on consideration of the range of reasonable approaches to the project, and each correctly concluded that the bid was mathematically unbalanced—that is, that the bid for mobilization and cold planing was outside the range of reasonableness. Therefore, I see no error in how the agency officials used information in reaching their decisions.

With regard to the information obtained by Mr. Hughes in his telephone conversation with Quality Asphalt, that information is helpful for Granite. Rather than constituting an unwarranted use of actual business purposes to explain away a lack of balance, however, this information simply confirmed that Quality Asphalt's bid was mathematically unbalanced. Having this concession by Quality Asphalt means that the agency officials would have little occasion to further consider the reasonableness of the cost structure of the procurement. We know from this admission that the bid is *mathematically* unbalanced—that is, that the bid for the early items of mobilization and cold planing, and the bid for the later item of asphalt, were outside the bounds of reasonable costs for these items.

Whether the bid was *materially* unbalanced, however, is a different inquiry. That inquiry will depend in large part on the size and timing of the mathematical unbalance.[44] We turn next,

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43 Granite finds fault with reliance on hearsay, offering an affidavit at the Reply Brief stage as a source of reliable sworn testimony. But in an administrative hearing, I am allowed to consider hearsay evidence, and will do so unless a party objects and shows that the hearsay is unreliable. Granite has not identified what hearsay evidence it finds objectionable or shown that the hearsay is unreliable. In these circumstances, I will rely on all evidence in the record to analyze the range of reasonable possibilities.

44 Because the size and timing of the frontloaded mathematical unbalance is an important question when determining material unbalance, using actual business information to excuse the unbalance could be an error in the

then, to the question of whether the bid was materially unbalanced, starting with whether the bid may be tantamount to a significant advance payment.

D. Does Quality Asphalt's bid result in the Department making a significant advance payment to Quality Asphalt?

To make its argument that Quality Asphalt's bid is tantamount to a significant advance payment, Granite has provided three cash-flow analyses, one for each of the two bids, and one for the engineer's estimate. Each analysis is based on the same set of assumptions regarding when the work will occur. Granite's analysis reveals the following:

- Quality Asphalt bid $1.8 million for mobilization/demobilization, when the engineer estimated the actual value of this item at $500,000. Granite notes that 60 percent of mobilization costs will be payable at the end of the first two-week project period.[45] Therefore, Quality Asphalt's bid will result in $1.08 million in mobilization costs being paid in the first pay period versus $300,000 under the engineer's estimate.[46]
- For cold planing, Quality Asphalt bid $10 per square yard, totaling $2.443 million, while the engineer estimated $3 per square yard, totaling $732,900.[47] Granite asserts that 88 percent of cold planing will occur and be payable in the first pay period.[48] Under this cash-flow scenario, Quality Asphalt would be paid $2,148,150 after the first pay period, while under the engineer's estimate only $644,445 would be paid for cold planing during this time.
- Based largely on these two admittedly unbalanced items, Granite asserts that $3,844,635, or 20.79 percent of Quality Asphalt's bid, would be payable after the first two weeks. Under the engineer's estimate, only $1,490,273, or 5.32 percent, would be payable at that time.

Granite concludes that this acceleration of the payment schedule is tantamount to a significant advance payment.

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material unbalance analysis. But neither the procurement officer nor the project manager made that error—they, like this analysis, used the engineer's estimates (not actual cost) to establish a reasonable rate for purposes of the material unbalance analysis.

[45] Granite Exhibit J at 1.

[46] *Compare* Granite Exhibit J at 1 *with* Granite Exhibit J at 3.

[47] Granite Exhibit N at 4.

[48] Granite Exhibit J at 1.

In response, Central Region argues that the cases instruct that a frontloaded bid must be "many multiples" of a reasonable bid before the frontloaded bid will be found to be materially unbalanced.[49] Central Region focuses largely on the mobilization bid because, in its view, the cold planing activity, while unbalanced, could reasonably occur in part during later pay periods, where it would be offset by the low paving costs.[50] Central Region acknowledges that Quality Asphalt's bid for mobilization, a work unit that will occur early in the project, was 3.6 times higher than the engineer's estimate, and at least one case has held that a multiple of that size could be found to be materially unbalanced.[51] Central Region asserts, however, that the key factor is not just how many multiples the frontloaded item is over the estimated value. Also important, in its view, are (i) the dollar value by which the frontloaded item exceeds the reasonable cost for the item; and (ii) the percentage of the contract that is unbalanced. Central Region concludes that Quality Asphalt's mobilization charge, which exceeds the engineer's estimate by $780,000, is not a significant advance payment because it is only 4.2 percent of Quality Asphalt's total bid price.[52]

In trying to determine whether a frontloaded payment is a significant advance payment, we must consider whether the payment significantly exceeds the value of the work performed. The question is not merely whether the payment exceeds the value of the *unit* of frontloaded work that was bid unreasonably high—we already know that to be the case because that is the question that was answered when the work was found to be mathematically unbalanced. Because material unbalance is a different question than mathematical unbalance, it necessarily follows that the material balance inquiry must be broader than merely looking at the specific unit that is overpriced. Granite's reliance on its cash-flow analysis in making its argument that Quality Asphalt's bid was materially unbalanced implicitly recognizes the importance of the flow of value.

In a construction contract, the flow of value to the owner is somewhat obscure. In some respects, even pre-bid work has value because it advances the project toward the finish. In another respect, the project has no value until done—airplanes cannot use an unfinished taxiway.

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[49] Appellee's Brief at 9 (citing *Barnard-Slurry Walls,* B-274973).

[50] *Id.* at 17-18. Central Region also argues that cold planing will yield some material value in addition to the value of the job, because the removed asphalt may have some recycle value (although not on the taxiway itself), which would not be reflected in the engineer's estimate. This argument, although correct, appears to be relatively insignificant, in that Central Region did not provide a dollar value for the asphalt. It does underscore, however, the basic concept that the flow of value in a complex project is not easy to determine.

[51] *Id.* at 11 (citing *ACC Construction,* B-250688 (Comp. Gen'l 1992)).

[52] *Id.*

Given the obscurity of the inquiry, the cases allow for a degree of variability. For cases decided on the "significant advance payment" theory, we generally are looking for solid evidence of actual overpayment that significantly exceeds the reasonable value received by the owner. The object here is to avoid having to make a precise calculation of the flow of value, and to only reject those bids where the putative advance payment is both obvious and significant.

As Central Region observes, in analyzing whether a frontloaded bid is tantamount to a significant advance payment, both the multiplier of cost over value, and the actual dollar value of the overbid, are factors that must be considered. Whether the overbid is quickly offset by the underbid can also be a significant distinction between a mathematical unbalance and a material unbalance.

In *Barnard Slurry-Walls,* for example, the payment of a grossly inflated bid for preparatory work, which would occur in advance of other work, was clearly a significant advance payment.[53] In that case, although the bidder argued that payment would be pegged to value received, the Comptroller General noted that was not correct. Payment was based on unit cost, so that overbidding a unit of preparatory cost meant that payment would surpass value.[54] The decision made clear that the deciding factor was that value paid exceeded value received.

In *ACC Construction,* although the size of the multiplier over the estimated price for the frontloaded bid was considerably smaller than it was in *Barnard Slurry-Walls,* the evidence indicated that the construction firm could complete the inflated item (carports) in 180 days, while the underbid items (interior renovation) could take up to 540 days to complete.[55] This would result in a considerable lag time before the value paid to the contractor was equal to the value received by the owner. The structure of the bid would result in a lack of incentive to satisfactorily complete the interior renovation. Therefore, the Comptroller General upheld the finding of material unbalance.[56]

The contracting officer's decision in Central Region's 2016 Seward Highway 92nd Avenue Connector project is consistent with this analysis.[57] There, Central Region rejected a bid as materially unbalanced when the bid item of "clearing and grubbing" was significantly overbid.[58] The clearing work had to occur before the migratory bird window, which was in advance of the

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[53] *Barnard-Slurry Walls,* B-274973.
[54] *Id.*
[55] B-250688.
[56] *Id.*
[57] Granite Exhibit E.
[58] *Id.*

bulk of the project.[59] The other overbid item, grubbing, would occur later, but still early in the project before the underbid item—the fill (called "borrow")—would begin.[60] The clearing and grubbing item was many multiples over the value to be received by the owner—Central Region asserts that the bid for this item was 25 times more than the value.[61] Given the size of the multiplier, and the lag time between the overbid items and the underbid items, the flow of value clearly resulted in a significant advance payment.[62]

With this understanding of the issue, the analysis here becomes relatively easy. Comparing the size of the frontloaded payment in this case to the size of the frontloaded payment in other cases shows that Quality Asphalt's bid for the two underbid unit items is sufficiently out of balance that it falls within the range of bids that could, in some circumstances, be considered materially unbalanced. A key factor in determining materiality, however, is the length of time that any lack of balance remains on the books. Careful study of Granite's own workflow analysis in Exhibit J shows that even under Granite's scenario, repaving will begin relatively soon after mobilization and cold planing—Granite estimates that paving will begin during the second two-week pay period.[63] Under each of Granite's three cash-flow analyses, over 80 percent of the project is complete within four pay periods. Thus, the expected flow of value to the owner is swift and efficient under this project. Moreover, more of the cold planing could reasonably occur at the same time as paving than is reflected in Granite's analysis, reducing the size and time of the advance payment contemplated in Granite's cash-flow analysis.

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[59] *Id.* at 7.

[60] *Id.*

[61] Appellee's Brief at 13. The precise multiple is unclear because the engineer made an error in estimating the acreage to be cleared. According to Central Region, after correcting for the error, the bid for clearing and grubbing was $2 million for an item worth $80,000, or a multiplier of 25. Although this number may not be precise, the case clearly is based on the undeniably significant inflation of frontloaded costs, which is considerably higher than the inflation of early costs in Quality Asphalt's bid.

[62] Granite argues that the binding legal principle applied in the 92nd Avenue Connector decision was that "[e]ach bid item must carry its own weight even when the work is of such a short duration that high bid items will be quickly offset by low bid items." Appellant's Opening Brief at 6 (emphasis deleted). That statement, however, is true only when determining *mathematical* unbalance. We know by definition that in a mathematically unbalanced bid, some items will not carry their own weight. I read the 92nd Avenue decision as consistent with the principle that important factors in determining whether a frontloaded bid is a significant advance payment include the size of the overpayment for an item, the multiple of the frontloaded cost over reasonable cost, and the expected flow of value. There, even though the construction season was short, and the unbalance would be corrected before the end of the construction season in the fall, the frontloaded payment was much larger in comparison to the value. Notably, although the duration of the unbalance was not long, there was a built-in lag between the overbid items and the underbid item. Here, in contrast, the multiple of value for the frontloaded item is a fraction of what it was in the 92nd Avenue project. Under any reasonable scenario, the underbid item, paving, will follow mobilization and cold planing with a shorter lag time.

[63] Granite Exhibit J.

Of course, as Granite's Reply Brief and the accompanying affidavit point out, the opposite is also true—the actual work flow could involve some delay, and some interruption between the cold planing and paving. The evaluation of the reasonable range of possibilities should consider this eventuality, and should consider whether it would mean that the bid was materially unbalanced. Here, I have considered the possibility of a work schedule where the paving occurs later than contemplated in Granite's hypothetical cash-flow analysis.[64] The later the paving, and the longer the interruption between mobilization/cold planing and paving, the more likely that the bid could be found to be materially unbalanced. But giving consideration to all reasonable work schedules, the size of the out-of-balance up-front payments, and the length of time that it remains out of balance, the flow of value in Quality Asphalt's bid does not compel a finding of a significant advance payment. Merely being frontloaded, as this bid undoubtedly was, does not mean that a bid is materially unbalanced.[65]

Granite has not shown that the bid structure gives rise to a likelihood that Quality Asphalt will be using the Department's money to capitalize the project or have an incentive to underperform on the backend of the project. Under this compressed timeline, those concerns are not present. Thus, the procurement officer's decision that the bid was not tantamount to a significant advance payment is a reasonable decision.

Nothing in this decision should be interpreted as disagreeing with Granite's arguments that a better approach to bidding would have each unit item stand on its own. Indeed, Central Region acknowledges that Quality Asphalt risked having its bid rejected as a nonresponsive, materially-unbalanced bid when it frontloaded its bid.[66] Yet, the criticisms leveled by Granite, while apt, go mainly to the issue of mathematical unbalance.[67] Given that mathematical

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[64] The analysis should not, however, be based on Quality Asphalt's actual schedule unless required by ITB. The analysis of whether a bid is responsive is done *ex ante,* based on the range of reasonable work schedules.

[65] *In re Rust International Corporation,* B-256886 (Comp. Gen'l August 30, 1994) ("front-loaded bids which are not grossly front-loaded may be accepted").

[66] Appellee's Brief at 16.

[67] For example, Granite appears to argue that under *Barnard-Slurry Walls* and *Technology Applications, Inc.*, B-236790 (Comp. Gen'l 1990), overstating mobilization or preparatory costs is *per se* material unbalance. Appellant's Opening Brief at 10-11. Although both of these cases do sharply criticize the practice of overstating frontloaded costs, neither held that this practice would be *per se* material unbalance. In both cases, some degree of mathematical unbalance would be allowed, even for mobilization or preparatory costs. The problem was the degree and extent of the frontloading of costs, which, in those cases would be a significant advance payment. *See Barnard-Slurry Walls,* B-274973, and *Technology Applications, Inc.*, B-236790. The same point is made by Granite in its Reply Brief, where it argues that the Department never addressed Quality Asphalt's admission that it undervalued the hot-mix asphalt and overvalued mobilization and other lump sum items. Granite concludes that "the various unit prices should reflect the actual cost of work." Reply Brief at 2. This statement, however, gets only at the issue of mathematical unbalance, which, while disfavored, does not make the bid nonresponsive.

unbalance is acceptable, however, Granite's criticisms of the problems with mathematical unbalance are not accurate statements of the law on material unbalance. Under the facts of this case, the procurement officer's decision did not abuse his discretion in finding that any payment made in advance of work was not a significant advance payment.

E. Does Quality Asphalt's bid give rise to a reasonable doubt that it will not be the low bid?

Granite Construction also argues that Quality Asphalt's bid will not be the low bid if something happens to terminate the project before the project is 80 percent complete. That is because its cash-flow analysis shows that until the paving is done—which Granites estimates will occur during the fourth pay period—total remuneration for Quality Asphalt would exceed total hypothetical remuneration for Granite.[68] Accordingly, Granite argues that the bid must be found materially unbalanced.

Although Granite's factual analysis is plausible, its legal argument is flawed. The cases that express concern about the likelihood of an event preventing a bid from becoming the low bid arise most often in the case of contracts that have an optional extension after the initial period. If the price of the option is included in the low bid calculus, and the bid does not become the low bid until the option is exercised, the risk of the bid not being the low bid increases because an option is always riskier than the set term of the contract.[69] Because an option requires an official to exercise discretion, it increases the risk that something could occur to cause a bid to no longer be the low bid. Although this theory of material unbalance is not limited to cases with contracts that have an option to renew, the theory does require something out of the ordinary to give rise to reasonable doubt that the bid would not turn out to be the low bid.[70]

Here, Granite's argument is essentially that any contract has risk, so delay in a bid becoming a low bid means that an unbalanced bid is *per se* materially unbalanced because of the lack of certainty. If that were true, the contract would have prohibited all out-of-balance bids that had some degree of frontloading costs. Granite's argument would make the advancement payment theory, which is also based on frontloaded costs, superfluous.

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[68] Granite Exhibit J at 1-2.

[69] *See, e.g., Crown Laundry* (noting that when bid for base period is higher than bid for option period, it "enables the bidder to use during a base contract period government funds more properly allocable to option periods and creates the prospect of a windfall if all options for some reason are not exercised").

[70] *See, e.g., In re Integrated Protection Systems, Inc.,* B-254457 (Comp. Gen'l January 19, 1994) ("CS&E's bid becomes low, relative to IPS' bid, in the sixth month of the first option year. The Army states that it intends to exercise all the options, and the record does not reflect circumstances suggesting otherwise. Thus, on this record there is no reasonable doubt that CS&E's bid will result in the lowest overall cost to the government.").

Material unbalance under this theory, however, does not arise until we have reasonable doubt about whether the project will proceed to the pay period where the apparent low bid becomes the actual low bid. We must approach this project with the good-faith expectation that it will not terminate early. To establish reasonable doubt about completion of the project would require some facts or circumstances that give rise to reasonable doubt other than a general concern that all contracts have some risk.[71] Using Granite's own cash-flow analysis, having the bid become the low bid by the fourth pay period—a time span of only eight weeks—is such a short time that it would not normally give rise to a reasonable doubt that the project would be terminated in less time.

The only out-of-the-ordinary concern that Granite cited was the budget battle in the legislature that threatened a state shutdown. Granite did not, however, make the case that a state shutdown was a reasonably possible event or that it would likely prevent completion of the taxiway. Balancing the risk of that unlikely event against the importance of completing the taxiway before winter makes very remote any possibility that this project could terminate early. The two engineers close to the project did not see any other event that could cause this project to shut down before completion. Therefore, Granite has failed to prove that the procurement officer erred when he did not find reasonable doubt that Quality Asphalt's bid would be the low bid.

F. Did the procurement officer fail to follow binding precedent?

Granite's final argument is that the procurement officer in this case erred by failing to follow the "principles laid down by DOT in the 92nd Ave. Protest decision."[72] As explained above, however, the analysis in the 92nd Avenue decision is consistent with the analysis in this decision.[73] The outcome is different because the facts are different. Moreover, because a

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[71] Other theories of reasonable doubt about the bid resulting in the low bid are possible. For example, reasonable doubt about a bid being the low bid could be found if the item that was overbid might end up being supplied at a much lower volume than anticipated. Granite has not made that argument here, however. Moreover, the project manager anticipated that concern, and doublechecked with the estimator to confirm that the asphalt quantities in the bid were reasonably accurate. Another possible theory of reasonable doubt could be based on the time value of money if the present value of the frontloaded payment to the low bidder exceeded the present value of a more balanced bid. Granite has not made that argument either, and, given the ease with which it could be refuted by a present-value analysis, it would not be a credible argument. In addition, a bid that has a large number of units that will not be payable until the end stages of the project could give rise to special concern, especially if the later items were low-bid units. That is not the case here, where even under Granite's analysis, the bid becomes the low bid midstream in the construction season. *See* Granite Exhibit J.

[72] Appellant's Opening Brief at 20.

[73] Although a person could read the 92nd Avenue decision differently on the issue of whether the unbalanced bid would result in the lowest bid, I read its discussion as remarkably similar to the discussion of that issue in this decision. This decision will not, however, revisit or thoroughly analyze that aspect of the decision because it is not binding here.

procurement officer's decision in a sister case is not binding precedent, even if the analysis in the two cases did diverge to some extent, it would not be reversible error unless the procurement officer's decision in this case was not consistent with the law. Because Mr. Dougherty's decision is consistent with the law, the decision is affirmed.

IV. Conclusion

Quality Asphalt's bid for the reconstruction of Taxiway Y of the Anchorage International Airport was mathematically unbalanced but not materially unbalanced. The procurement officer correctly determined that Quality Asphalt's bid was responsive to the Invitation to Bid. The procurement officer's denial of Granite Construction Company's bid protest is affirmed.

DATED this 27th of July, 2017.

By: *Signed*
Stephen C. Slotnick
Administrative Law Judge

Adoption

Under the authority of AS 44.64.060(e)(1), I adopt this decision as the final administrative determination in this matter.

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this 8th day of September, 2017.

By: *Signed*
Mark Luiken, Commissioner
Dep't of Transportation & Public Facilities

[This document has been modified to conform to the technical standards for publication.]