BEFORE THE
MARYLAND STATE BOARD OF CONTRACT APPEALS

Appeal of DOMINION CONTRACTORS, INC.	)	
	)	Docket No. MSBCA 1041
Under SHA Contract No. AA-244-501-514	)	

February 9, 1984

Contract Interpretation - A reasonably intelligent bidder could have interpreted the contract only to require the furnishing and installation of water service from a municipal water main to a meter which it likewise was to furnish and install on State property.

Trade Practice - Evidence of a trade practice is not admissible to contradict the plain meaning of a contract.

Contract Interpretation - The contractor's interpretation of the instant contract obviating the requirement to install water service between the municipal water main and the property line rendered other provisions in the contract meaningless. Such an interpretation was rejected in favor of one which harmonized all contract provisions.

Patent Ambiguity - Duty to Inquire - Where the contractor was presented with an obvious inconsistency, it had a duty to inquire prior to bid. Failure to do so rendered it responsible for the adverse impact of its erroneous interpretation.

Contract Interpretation - The contract Specification clearly provided that the contractor was to furnish and install truck lifts in such a manner as to have them ready for satisfactory service. This requirement was found to be binding notwithstanding the fact that installation instructions were not contained in the contract drawings. The contract Specification and drawings were determined to be complementary and any requirement contained in one or the other was to be considered part of the contract.

Contract Interpretation - Where the contract Specification clearly required the furnishing and installation of tire changers and a kerosene tank, the absence of installation information on the drawings, at best, constituted a glaring omission which triggered a duty to inquire prior to bid. Failure to inquire left the contractor responsible for its erroneous assumptions concerning installation of these items.

Equitable Adjustment - Where the State deleted a requirement to furnish and install a brand name kerosene tank and transfer pump, it was entitled to a credit based upon the reasonable costs of these exact items and not some other models considered by the contractor, but not approved by the State, as equals.

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OPINION BY MR. KETCHEN

This appeal is taken from a final decision[1] issued by the State Highway Administration's (SHA) Chief Engineer denying Appellant's claims for additional costs resulting from alleged changes to the captioned contract work and assessing a credit for SHA's deletion of certain contractually required equipment. Both entitlement and quantum are at issue.

Findings of Fact

A. Introductory

In early 1980, SHA issued an invitation for bids (IFB) for construction of a new SHA District No. 5 Office and Maintenance Shop Complex located adjacent to Maryland Route 450 (Defense Highway) in Anne Arundel County, Maryland. The project generally involved construction of three single-story structures including an office building, a vehicle storage building and a shop building. (Contract, p. 305).[2] The project further required the furnishing and installation of equipment necessary to SHA's operations at this facility.

Bids were opened on April 22, 1980 and Appellant was identified as the lowest responsive and responsible bidder. On June 25, 1980, SHA awarded Appellant the contract in the amount of $2,853,000.00. In the interim, Appellant awarded a subcontract to Eastern Mechanical Contractors, Inc. (Eastern)[3] in the amount of $669,000 for the contract mechanical work.

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[1]This decision was approved by the SHA Administrator as required by COMAR 21.10.04.01B. (Appeal File, Tab II).

[2]General Conditions, Art. 1, para. a (Contract, p. 6) provided:

> "The Contract Documents consist of the Agreement, General Conditions, Supplementary Conditions, Instructions to Bidders, Proposal, Bond, the Drawings and Specifications, all Addenda duly issued prior to submission of Bids, all Change Orders duly issued; and any amendments to the contract duly executed by both parties. These form the Contract." We will use the term "Contract" generally in referencing these contract documents.

[3]Eastern is the real party in interest in this dispute.

(Board Exh. 1). In turn, on June 13, 1980, Eastern entered into a second-tier subcontract with the Drumwood Corporation (Drumwood) in the amount of $100,000 for the utility portion of the mechanical work. (Board Exh. 1).

On July 17, 1980, SHA issued a notice to proceed with the work. During the course of performance, there came a time when Appellant asserted that it was not required by the terms of the contract to furnish or install (1) an 8" water meter and piping to the City of Annapolis (Annapolis) water main located beneath Md. Route 450 (water service connection), (2) a below ground pit or trench necessary for operation of the twin-post truck lifts (lift pits), (3) tire changing equipment in the shop building (tire changers), and (4) a 550 gallon underground kerosene storage tank and associated kerosene transfer pump (kerosene tank). SHA nevertheless required Appellant to perform the first three items of work. The final item was deleted from the contract and SHA sought a credit therefor. This dispute arises based on Appellant's claim for extra costs for performing items 1 through 3 and SHA's claim for a credit for deleting the kerosene tank. A final decision denying Appellant's claims and affirming SHA's entitlement to a credit for the kerosene tank was issued on June 25, 1981. A timely appeal was taken on July 20, 1981.

B. Water Service Connection and Meter[4]

1. Applicable Specifications

Several provisions under the contract's sitework requirements addressed the responsibility for furnishing the materials and equipment, including the necessary piping and valves, and doing the work necessary to bring water service to the SHA site. In particular, Section 2F (Contract, p. 143) provided that:

> Water Service Connections and Metering
>
> 1. The Contractor will notify Mr. John H. Eick (Phone 263-0600) or (269-0545) Deputy City Engineer, Department of Public Works, City of Annapolis, before commencing the water service connections and meter installation.
>
> The Contractor will be responsible for providing all necessary water service connections and related meter installations, detailed on the plans and in these specifications, coordinating all work with the City of Annapolis Department of Public Works. The following detail sheets are for the contractor's use in performing this work.

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[4]Except where the 8" water meter is mentioned specifically, the term "water service connection" includes all the material, equipment and work necessary, including furnishing and installing the 8" water meter, to bring water from the water main beneath Md. Route 450 to the "leaving" or "house" side of the meter. The "leaving" or "house" side of the meter is that side of the meter from which water flows toward the structure. (Tr. 63). There is no dispute here that Appellant's contract required it to furnish the onsite water connection from the leaving side of the water meter.

The Contractor will be responsible for reimbursing the City of Annapolis for the 8 inch tap into the 14 inch water main. The approximate fee will be $400.00, but each bidder should verify this fee with the City of Annapolis.

Upon completion of the water service connections, all existing pavement disturbed as a result of this work shall be repaired as per Standard No. MD 578.01.

Maintenance of Traffic for Water Connection

2. During that portion of the work when the water line is being connected to the water main located in the roadway portion of Md. Rte. 450, the Contractor will be required to maintain traffic as outlined herein.

* * *

The Contractor's TCP [Traffic Control Plan] must be submitted, in writing, to the Engineer 20 days prior to starting work on the water connection. . . .

* * *

The detail sheets referenced in Section 2F as being provided for the contractor's use were contained at pages 144-150 of the contract.[5] Page 145, in particular, was a schematic drawing (Appendix A) furnished to SHA by the City of Annapolis. (Tr. 176). It provided the engineering details for making the water service connection between the leaving side of the 8" water meter and the water main and contained the following notation:

"Meter Shall Be Furnished By A. A. Co.
& Installed By Contractor"

SHA gave this schematic drawing only a cursory review before placing it in the contract documents and thus mistakenly failed to remove the note indicating that Anne Arundel Co. would furnish the water meter. (Tr. 176).

Contract drawing no. SI-2 (Sheet 3 of 39) similarly contained the following pertinent notes covering the scope of the water service connection:

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[5]Contract page 146 is a sketch of a Hersey-Sparling Meter Co. water meter. Page 147 provided SHA Standard No. MD-104.02 for a typical flagging operation for traffic control while operating one lane of traffic during highway work. Page 148 is SHA Standard No. MD-104.10 describing traffic control requirements for a typical work site within 15 feet of the edge of the pavement. Pages 149 and 150 provided SHA Standard No. MD-578.01 describing SHA requirements for pavement repairs after roadway excavation.

"Complete Water Service By Mechanical Contractor Including But Not Limited to Connection At Main In Route 450, Entrance Line, Concrete Meter Box, Meter And All Necessary Valves, Piping and Fittings For Installation Of Meter And By Pass. All In Accordance With The Requirements Of Anne Arundel County"

* * *

"14" C.I. Water Main - Location Near Center Of Road, To Be Determined By The City Of Annapolis D.P.W. 1-8" x 14" Tapping Sleeve Required." (Underscoring added)

General Requirements, Section 1A, Special Condition 3 (Contract, p. 91) further provided that any work shown on the drawings is part of the contract work unless clearly noted N.I.C. (Not In Contract). Here, the water service connection, including the water meter, was clearly depicted on Drawing no. SI-2 without the foregoing notation.

2. Evolution of Dispute

An existing 14 inch water main was located in Md. Route 450 adjacent to the SHA District 5 office site. (Contract drawing SI-2, sh. 3). In order to bring water to the site, a connection to the existing main was necessary. This connection was to be made by means of a tapping tee and valve. Piping then was to be run from the valve to a meter which was required to be installed within a concrete vault and be surrounded by a meter bypass system. The property or leave side of the meter was to connect by underground piping to the internal plumbing to be installed as part of the SHA office and shop complex construction.

Appellant relied upon a quotation prepared by Eastern in bidding the mechanical portion of the project. Eastern's quotation was prepared by its President, Mr. High, who admittedly wrestled with certain discrepancies evident in the contract requirements pertaining to mechanical work. After telephone conversations with unidentified representatives of Anne Arundel County, however, Mr. High concluded that Anne Arundel County would furnish the 8" water meter and that the City of Annapolis would install the water service connection. Eastern's responsibility for the disputed portions of the water service thus was determined by Mr. High to be limited to the coordination and supervision of the work.

Mr. High's conclusion regarding his company's responsibility for the water service connection was based in part on what he believed was an established trade usage of the term "service and area charges". In his experience, it is customary for the local water agency to bring service to the site using its forces. The owner then pays the local agency directly. The cost of this work is said to be a service and area charge. Mr. High agreed that the term may also include the general costs of capital facilities assessed by a local agency as a fee for the privilege of bringing water to an individual owner's site. (Tr. 140-41). He admitted, however, that what is included within "services and area charges" may vary from jurisdiction to jurisdiction and that it can be modified by local custom and practice. Mr. High further testified that a contractor could perform such work directly for an owner if permitted by the local agency. (Tr. 139-141).

Mr. Donald Miskelly also testified on Appellant's behalf regarding the meaning of the services and area charges clause. He testified that his experience had been that service and area charges were paid directly by an owner and ordinarily included the costs incurred by the local water agency for making the actual water service connection to an individual owner's site. (Tr. 72). He agreed that the types of costs included could vary from jurisdiction to jurisdiction. (Tr. 77).

Mr. Gwen D. McDade, SHA's Architect for Capital Improvement Projects, testified that a service and area charge is a fee charged to a user by the responsible local water agency for the user's privilege of connecting to that agency's capital facility. (Tr. 162). According to him, the term covers the local agency's capital costs of providing water service to the community in general, as well as operating and maintenance costs for those facilities. Mr. McDade was not aware of any other well established usage of the term. (Tr. 163).

Mr. High's uncertainty regarding the water meter and water service connection was evidenced in the execution of Eastern's subcontract with Drumwood. Although Drumwood's quote to Eastern for the utility work reflected its interpretation that said work included the water service connection from the Annapolis water main to the leaving side of the meter, Mr. High told Drumwood to delete from its price the requirement for furnishing and installing the 8" water meter and making the water service connection to the Annapolis water main because Anne Arundel Co. was to do the work. (Tr. 109). Mr. High, however, required Drumwood to install the meter. In this regard, Mr. High testified that page 145 of the contract could have been read to require installation of the meter and that he was simply protecting himself in case it did. (Tr. 105-06).

During the course of the work, by letter dated September 17, 1980, Eastern first requested SHA to pay $12,188.00 to the City of Annapolis as the cost it was being charged for the permit fee and the water meter. By letter dated October 1, 1980, SHA denied responsibility for these costs and directed Appellant to furnish and install the water meter and make the water service connection to the water main as part of the contract work. (Appeal File, Tabs IV, A2, A3).

By letters dated January 2 and January 7, 1981, Appellant requested payment of $17,600.00, as an equitable adjustment for completing the water service connection and installing the meter. (Appeal File, Tab IV, A9, A10). The requested payment included $15,000 for the water service connection and meter, and $2,600 for the permit fee assessed by Annapolis for the privilege of connecting to its water service system. By letter dated June 25, 1981, SHA denied Appellant's claim on the ground that this work was included within the contract's scope of work. Appellant's claim for this work as it now stands is $22,038.00. (Appellant's Post-hearing Brief, p. 7).

Decision - Water Service Connection

Appellant's claim for extra compensation raises a contract interpretation issue concerning whether Appellant was required to make the necessary offsite water connection, including furnishing and installing the water meter, to the Annapolis water main. Appellant maintains that under the services and area charges clause, and the normal practice, it was entitled to assume

in bidding that the local water agency would do the work and charge the owner directly. According to Appellant, the contract required it to merely coordinate the work. We disagree.

The law is clear that " . . . ' [t]he written language embodying the terms of an agreement will govern the rights and liabilities of the parties, irrespective of the intent of the parties at the time they entered into the contract, unless the written language is not susceptible of a clear and definite understanding, or unless there is fraud, duress or mutual mistake.' Ray v. William G. Eurice & Bros., 201 Md. 115, 93 A.2d 272 (1952); Kasten Construction Co., Inc. v. Rod Enterprises, Inc., 268 Md. 318, 301 A.2d 12, 17 (1973)." Fruin-Colnon Corp. and Horn Construction Co., Inc., MDOT 1001 (December 6, 1979) at pp. 10-11. The primary rule of contract interpretation implementing this principle requires that contract language be given the plain meaning attributable to it by a reasonably intelligent bidder. Fruin-Colnon Corp., supra, p. 11; Kasten Construction Co. v. Rod Enterprises, Inc., supra, at p. 329.

Here, the contract expressly required the contractor to furnish and install full water service to the site including the furnishing and installing of the water meter. Unless the contractor was to do this work, it simply would have made no sense for the contract to contain Section 2F explicitly directing the contractor to do the work with eight pages of instructions concerning how the work was to be done. Similarly, there would have been no need to tell the contractor by contract language to contact Annapolis before commencing the work, if anyone other than the contractor was to do it.

Section 2F further stated that the contractor was to furnish and install the water service connections and meter installations in accordance with the plans and specifications. (Compare Contract, p. 307; Tr. 120-21). Drawing SI-2 of the plans is particularly pertinent to this appeal. It shows the entire water service connection with the required 8" water meter clearly represented. In this regard, any item of work shown on the drawings was considered a part of the contract, unless the drawing expressly noted that a particular item shown was not part of the contract. In addition, a note on Drawing SI-2 was referenced specifically to the water service connection and meter. It provided for a complete water service by the mechanical contractor including but not limited to the connection at the main in Route 450 and for a water meter albeit, mistakenly, in accordance with Anne Arundel Co., instead of City of Annapolis, requirements. Although the note itself could have been better expressed, its meaning is clear when read in context with the contract instruction that any item of work shown on the drawings was part of the contract.[6]

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[6]In this regard, General Conditions, Art. 2, entitled "Contract Documents," (Contract, p. 8), provided as follows:

> "a. The Contract Documents (See Art.1, para. a) are complementary. That which is called for by any one shall be as binding as if called for by all.
>
> (1) Intent of the documents is to include all Work necessary for the proper completion of the project ready for continual efficient operation. It is not intended, however, to include any Work not properly inferable."

Appellant relies on the service and area charges clause set forth in Section 15A, para. 17[7] to maintain that the contract only required it to coordinate the water service work to be paid for by SHA and provided to the site by either Anne Arundel Co. or the City of Annapolis. Appellant rested its argument in part on its experience that the local municipality usually provides water service to the site and receives payment directly from the owner and the note on the schematic drawing at Contract page 145 that the meter would be furnished by Anne Arundel Co.

Turning to Section 15A, para. 17, first, we note that it does not state that the local water agency was to provide the water service. It merely says in general and prospective terms that the owner will pay for any charges that might be required to be done with the local water agency's own work force. Thus there was only a vague intimation that the local water agency might be responsible for providing the water service to the site. Certainly, there was not enough there for Appellant to reasonably conclude that it was not to provide the water service and meter in the face of the specific provisions in Section 2F and Drawing SI-2 directing the contractor to do this work. In this regard, the record fails to establish a set trade practice regarding the term "service and area charges" relative to who was responsible for providing the water service to the site. Even if Appellant's understanding of the term had been adequately established, however, it cannot be used to contradict the plain meaning of the contract's terms which we have found provided that the contractor was to provide the water service. Compare Applestein v. Royal Realty Corp., 181 Md. 171, 173, 28 A.2d 830, 831 (1942).

To the same effect, see Contract page 79.

[7]Section 15A, para. 17a., provided that:

> "Any charges which may be made by the agencies of Anne Arundel County in connection with the water, or storm drainage systems, excepting the building permit, will be paid by the owner. The Contractor shall make all arrangements with the agencies for determining the charges, scheduling any work that the agencies may require to be done by their own forces and shall completely coordinate the details of such work and charges without additional cost to the Owner."

Next, with regard to Section 15A, para. 17a, it was not reasonable for Appellant to have focused on that one provision while ignoring all else. The provisions of this contract were required to be read as a whole giving effect to all its provisions if possible. Cam Construction Co., MSBCA 1088 (October 25, 1983). If Section 2F and the note on Drawing SI-2 are compared in context with Section 15A, para. 17, there should have been little doubt that Appellant was obligated to make the water service connection and install the meter. The non-specific and prospective expression in the service and area charges clause (Section 15A, para. 17) reasonably could not be said to diminish the explicit direction of Section 2F and the complementary note on Drawing SI-2 telling the contractor that it was required to make the water service connection. Stated another way, Section 2F, Drawing SI-2 and Section 15A, para. 17 can be read together reasonably to mean that Appellant was to provide the water service including the furnishing and installing of the 8" water meter with SHA required to pay any charges for any other work that Annapolis may have done outside the specific contract work. This interpretation reasonably harmonizes those provisions of the contract relating to the water service connection. On the other hand, Appellant should have recognized that the contract provisions describing the water service connection would have become meaningless if its interpretation were adopted. Fruin-Colnon and Horn Const. Co., Inc., supra, at p. 14; Jamsar, Inc. v. United States, 194 Ct.Cl. 819, 827, 442 F.2d 930, 934-35 (1971).

Finally, we turn to the statement on the schematic drawing at page 145 of the contract that the water meter was to be furnished by Anne Arundel Co. Leaving aside the fact that Appellant determined prior to bidding that there was uncertainty whether Anne Arundel Co. or Annapolis was correctly referenced, we recognize that this note may have created some confusion. This note appears at first glance to conflict with explicit provisions of the specifications and drawings which we have determined required the contractor to provide a complete water service to the site including the furnishing and installing of the 8" meter. However, not every conflict in a contract's terms gives rise to an ambiguity. Compare Jamsar, supra, at p. 827. We believe there was none created here when the contract is read as a whole. In the instant contract, the apparently conflicting term regarding the water meter appears as a drawing note on one of eight pages of the contract that comprised Section 2F relating to the water service requirement. The page on which the note appears was one of the detail sheets that the textual portion of Section 2F stated was being furnished for the contractor's use in performing the installation work. The note thus appears as one of many details on the sheets provided to show the contractor how to install the water service, including installation of the meter, meter vault, meter by-pass, pipes, valves, etc. required in doing this work. Taken in context this sheet and accompanying note were intended to provide the mechanics of the installation of water service that the contract elsewhere specifically directed the contractor to do. Thus this note reasonably could not override the clear intent of this contract that we concluded above required the contractor to provide complete water service to the site including furnishing and installing the 8" water meter.

In summary, this contract in our opinion plainly required Appellant to furnish a complete water service including a meter. Since it follows from this that the contract requirements relating to the water service connection were not ambiguous, there is no occasion to resolve the alleged conflicting

provisions against SHA as the drafter of the document. Jamsar, supra, at p. 828.

However, ignoring all else and assuming, arguendo, that Appellant's interpretation was conceivable, i.e., that the intent of the contract was for it to merely coordinate the water service connection work to be done by Annapolis, we still would deny its claim for extra compensation. Appellant through Eastern was well aware of the alleged ambiguity both prior to bidding and prior to entering its contract for the work. The contract provided that if the contractor discovered any discrepancies or had any questions about any part of the IFB, or desired any explanation as to its provisions it was required to request clarification from SHA prior to bidding.[8] Neither Appellant nor Eastern did this. Consequently, Appellant, who relied on Eastern's bid, is in no position to complain. Compare Peter Kiewit Sons' Co., ENGBCA No. 4630, 83-2 BCA ¶16,778; Blount Bros. Construction Co. v. United States, 171 Ct.Cl. 478, 495-96 (1965). The rule we follow is stated in Beacon Construction Co. v. United States, 161 Ct.Cl. 1, 6-7, 314 F.2d 501, 504 (1963) as follows:

> " . . . The bidder who is on notice of an incipient problem, but neglects to solve it as he is directed to do by this form of contractual preventive-hygiene, cannot rely on the principle that ambiguities in contracts written by the Government are held against the drafter (e.g. Peter Kiewit Sons' Co. v. United States, 109 Ct.Cl. 390, 418 (1947)). Even more, the bidder in such a case is under an affirmative obligation. He 'should call attention to an obvious omission in a specification, and make certain that the omission was deliberate, if he intends to take advantage of it.' Ring Construction Corp. v. United States, 142 Ct.Cl. 731, 734, 162 F. Supp. 190, 192 (1958). See also, to the same effect, Jefferson Construction Co. v. United States, 151 Ct.Cl. 75, 89-91 (1960). . . . when he is presented with an obvious

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[8]Instructions to Bidders (Contract, p. 5) provided:

> "7. Discrepancies:
> Should a bidder find discrepancies in the plans and/or specifications or should he be in doubt as to the meaning or intent of any part thereof, he must, not later than seven (7) days (Saturdays and Sundays excluded) prior to the bid opening, request clarification from the Architect, who will issue an addendum or otherwise clarify the matter. . . . "

See also, General Conditions, Art. 2a.(2), Contract, p. 8 and Art. 10a, Contract, p. 20.

omission, inconsistency, or discrepancy of significance, he must consult the Government's representatives if he intends to bridge the crevasse in his own favor."

In this instance it does not make any difference to the outcome whether the discrepancies on which Appellant relies may not have been patent or glaring. "The question of whether an ambiguity is patent is only relevant where the contractor was not aware of it, and the court is called upon, in retrospect, to decide whether or not he should have been aware of it." James A. Mann, Inc. v. United States, 210 Ct.Cl. 104, 123, 535 F.2d 51 (1976). It is clear in this case that Eastern knew of the alleged discrepancies before it submitted its bid relied on by Appellant, and, thereafter, prior to entering the contract with Appellant. Having failed to heed the warning in the contract documents to obtain clarification from SHA, Appellant could not take award of the contract with a lower bid based on the less costly reading by Eastern, with a reasonable expectation that the gap could be bridged with a claim for an extra when SHA took a different view. S.O.G. of Arkansas v. United States, 212 Ct.Cl. 125, 546 F.2d 367 (1977). Compare Jamsar, Inc. v. United States, supra; Boyajian v. United States, 191 Ct.Cl. 233, 260 (1970).

C. Pits or Trenches Provided For Truck Lifts

1. Applicable Specifications

Division 15, "Mechanical," Section 15J, "Miscellaneous Equipment", of the specifications provided for trenches or pits[9] for the truck lifts as follows:

"2. HEAVY-DUTY TRUCK LIFTS:

"a. Provide two (2) electric-hydraulic twin post axle engaging heavy-duty truck lifts with remote hydraulic pump-reservoir assembly as indicated. Capacity 36,000 pounds. Adjustable wheel base range 102-202 inches.

b. Lifts comply with current issue of Commercial Standard 142 for Automotive Lifts, and its capacity shall not be affected by wheel base adjustments within the adjustment range. Units to have a low-oil lock.

* * *

d. Front saddle and adapter not to drag on the floor when the front post is moved for wheel base adjustment. Saddles constructed of standard steel channel.

e. Channel tracks that support the front post carriage shall be set flush with the floor. Cover plates move with the carriage to maintain a cover over the trench at all times. Carriage with roller bearing wheels to fit in the channel tracks.

* * *

[9]The terms "trench" or "pit" are used synonymously. (Tr. 110, 164).

g. Provide a 4-inch polyvinyl chloride (PVC) conduit to connect the rear recess with the front post trench to allow draining and to facilitate installing the hydraulic pipe line to the rear cylinder.

* * *

n. Lifts by Globe, Weaver or as accepted equal, to Weaver Model No. 106-BM with No. EC-66 duplex power unit or approved equal." (Underscoring added)

2. Evolution of Dispute

The specifications described a requirement for two post, hydraulic truck lifts to be provided in the new District 5 Shop. Except for having two lift posts, these truck lifts are similar to the single post lifts used in automobile service stations to lift automobiles off the floor for doing maintenance work. The SHA truck lifts, however, are designed so that the front lift post elevates the truck by the front axle and the rear lift post simultaneously engages and elevates the truck rear axle. The lift posts further were designed so that the front lift post could be moved forward and backward by a carriage and chain arrangement located beneath the surface of the shop floor. This would allow the relationship between the front and rear posts to be changed by as much as 100" to adjust for the variable distances between the front and rear axles of different size trucks. (Tr. 154). The specifications explicitly mentioned a trench in conjunction with the requirement that the front lift post move 100" to adjust for the different distances between truck axles. Also, the specifications referenced the Weaver Model No. 106-BM with No. EC-66 duplex power unit or approved equal. The manufacturer's specifications for the Weaver Model, which in general terms were incorporated by reference into the contract, provided for a pit to house the mechanism used to move the front lift post when adjusting it. (Tr. 163-64; Art. 4A).

It is undisputed that a pit below the horizontal surface extending in a vertical plane was necessary for the two post lift system in order to vary the relative distances between the two posts. (Tr. 113). However, SHA intentionally did not show specific engineering details for the lift pits on the drawings because the pit requirements had to be closely coordinated with the specific requirements of the lift manufacturer. (Tr. 146, 170). The drawings, however, did show the location of the truck lifts and indicated the cover plates that were said to be larger than necessary if lift pits were not required. (Tr. 26, 112, 113-116; Drawing M-5, Board Exh. 1). Eastern stated that it did not become aware of the lift pit requirement set forth in the specifications until it came time for it to install the lifts. (Tr. 39, 164). Prior to contacting SHA, however, Appellant and Eastern agreed that lift pits were required, although they could not agree whether Appellant or Eastern was responsible for this work. (Tr. 114-15).

The progress meeting minutes of September 2, 1980 and September 30, 1980 and Appellant's letter dated September 22, 1980 reflect that Appellant notified SHA of its view that its contract did not include construction of pits or trenches for the movable hydraulic lifts since they were not shown on the drawings. (Appeal File, Tab IV, C1, A2, B1). In the progress meeting minutes of September 2, 1980 and by letter dated October 10, 1980, SHA informed Appellant that lift pits were required as part of the contract work

based on Section 15A of the specifications. (Appeal File, Tab IV, C1, B2). These specifications in SHA's view required the contractor to furnish and install material, equipment, and systems, complete as specified and indicated on the drawings. Although Eastern installed the lifts, a masonry subcontractor to Appellant constructed the lift pits. (Tr. 39). Appellant asserted a claim for $1500 subsequently modified to $1400 (Appellant Exh. 2) in a letter dated January 13, 1981. In its final decision dated June 25, 1981 SHA denied Appellant's claim.

Decision - Lift Pits

Appellant maintains that it was not responsible for providing the lift pits described in the specifications since they were not detailed on the drawings. (Tr. 123). Appellant reasons that the drawings controlled the scope of work since Section 15A para. 2a provided that the work " . . . includes furnishing and installing material, equipment and systems complete as specified therein and indicated on the drawings." (Underscoring added). However, we find Appellant reasonably was required to provide pits for the lifts within the specified scope of work, even though pits were not detailed on the drawings. As we have already pointed out, a primary rule of contract interpretation requires that all provisions of a contract be read together and interpreted as a whole while giving effect to each provision if possible. Cam Construction Co., supra, p. 10; compare Dominion Contractors, Inc., MSBCA 1040 (May 20, 1982); Laurel Race Course, Inc. v. Regal Construction Co., Inc., 274 Md. 142, 153, 333 A.2d 319, 327 (1975). This principle of contract interpretation was reflected in the contract language itself which stated that the contract documents were complementary meaning that which is called for by any one document is to be read as required by all contract documents. (General Conditions, Art. 2a.; see Art. 1a). Since the contract clearly included both the specifications as well as the drawings, the scope of work included that work described on either the drawings or the specifications.

It thus was unreasonable for Appellant to focus on one word, the conjunction in the "specifications . . . and drawings" language, to arrive at the conclusion that it was only required to do that work shown on the drawings. The absence of detail concerning the pits on the drawings did not relieve it of the clear obligation to provide a workable lift system that necessarily included the lift pits as they were described in the specifications. (Section 15A, para. 2a). Compare Space Age Engineering, Inc., ASBCA Nos. 25761, 25982, 26020, 26381, 83-2 BCA ¶16,607; B. D. Click Co., Inc. v. United States, 222 Ct.Cl. 290, 614 F.2d 748 (1980); Unicon Management Corp., VACAB NO. 463, 65-1 BCA ¶4827; Highland Construction Corp. CGBCA T-222 et al., 67-1 BCA ¶6094.

In any event, if Appellant had doubts concerning its obligations regarding the clear specification requirement for the lift pits, the contract documents required Appellant to resolve them through contact with SHA. Here, Appellant failed to do so at its own risk. Compare Northeast Construction Co. of West Virginia, DOT CAB Nos. 68-33, 68-33A, 69-1 BCA ¶7556; Pettinaro Construction Co., Inc., DOT CAB No. 1257, 83-1 BCA ¶16,536.

D. Tire Changers

1. Applicable Specifications

Contract Specification Section 15J described the equipment to be placed in SHA's District No. 5 shop to change automobile and truck tires as follows:

"4. TRUCK TIRE CHANGER:

a. Provide an electric-hydraulic truck tire changer capable of servicing tubeless and tube-type, single and duplex, truck tires with 4:0 x 15 to 18:0 x 24.5 inch diameter rims.

"5. AUTOMOTIVE TIRE CHANGER:

a. Provide a pneumatic automotive tire changer capable of servicing passenger car and light truck tires with 12 to 17 1/2 inch diameter rims and 4 to 10 inch wide wheels.

2. Evolution of Dispute

The pneumatic automotive tire changer and the electric-hydraulic tire changer mistakenly were not shown on the contract drawings. (Tr. 166, 170). Note 4K on electrical drawing E-4, however, states that the electric-hydraulic truck tire changer is to be " . . . furnished at suitable outlet." (Tr. 129-130). Appellant maintained that the lack of information on the drawings meant that it did not have to furnish and install the tire changers. According to Appellant, and consistent with its argument regarding the lift pits, to be within the contract's scope of work the tire changers had to be shown on the drawings as well as described in the specifications. This is said to be because Specification Section 15A, para. 2a required the contractor to do the work "as specified . . . and indicated on the drawings." (Underscoring added). By letters dated October 29, 1980 and January 9, 1981, Appellant notified SHA that it was not required to furnish the tire changers. However, by letter dated January 29, 1981, SHA instructed Appellant to provide the tire changers since they were included within the specifications. Following this direction, Appellant installed the electric-hydraulic tire changer by plugging it into an electrical outlet. (Tr. 129). The pneumatic tire changer was installed by connecting it to an existing air line by a rubber hose. (Tr. 131). A change to the air hose connection was necessary in order to install the pneumatic truck tire changer. This was done in approximately 3 hours at a cost of $15.00 per hour. (Tr. 165, 167). By letters dated February 27, 1981 and March 3, 1981, Appellant requested an equitable adjustment in the amount of $5,828.00 for furnishing and installing the tire changers. (Appeal File, Tab IV, E7, E8). SHA denied Appellant's claim by a final decision on June 25, 1981. Prior to the hearing, Appellant modified its claim and requested $7,406.65 for providing the tire changers. (Appellant Exh. 2).

Decision - Tire Changers

A reasonable bidder seeing the explicit specification requirement for tire changers and knowing that it was constructing an SHA shop facility for servicing SHA vehicles, in our judgment, only could conclude that tire changers were required to be furnished and installed. Granite Construction

Co., MDOT 1011 (July 29, 1981). Appellant, in its post-hearing brief, conceded that it was required to furnish tire changers for this project. (Appellant's Post-hearing Brief, May 17, 1982, p. 9). However, Appellant maintains that it is entitled to installation costs in the amount of $552.00. We disagree. The contract expressly required Appellant to furnish a complete system installed and ready for operation. (Section 15A, para. 2a). Thus Appellant was required to make the connections necessary to provide tire changers complete and ready for operation. Space Age Engineering, Inc., supra. To install the electrical tire changer merely required that it be plugged into an existing electrical outlet shown on the contract drawings. The pneumatic tire changer was installed by connecting it to an existing air hose shown on the drawings after the hose coupling was modified. From the information provided in the contract, Appellant prior to bidding reasonably could have estimated the cost of installing the tire changers that the contract required be furnished as an operating system. (General Conditions, Art. 2a. (1); Art. 4a; General Requirements, Section 15A, para. 2a). Therefore, it was not entitled to any additional costs for their installation. Compare Northeast Contruction Co. of West Virginia, DOTCAB Nos. 68-33, 68-33A, 69-1 BCA ¶7556; Space Age Engineering, supra. In any event, the failure of the drawings to more fully show how the tire changers were to be installed was an obvious omission that Appellant failed to seek clarification of at its own risk. Pettinaro Construction Co., supra.

E. Kerosene Tank[10]

1. Applicable Specifications

The General Requirements, Section 15G, Underground Storage Tanks (Contract, p. 394, p. 399), provided for installation of a 550 gallon underground kerosene tank in pertinent part as follows:

> Note: The requirements of Division 1 and Section 15A apply to work in this section.
>
> 1. GENERAL
>
> a. Furnish and install all underground storage tanks including the following:
>
> * * *
>
> d. Install tanks, piping and pumps as indicated . . .
>
> * * *
>
> 8. KEROSENE TANK:
>
> a. Tank: Provide an Owens Fiberglass Model D-5 or approved

[10]When we refer to the kerosene tank in resolving this claim we include the associated kerosene transfer pump described in Section 15J, para. 7.

equal 550 gallon underground storage for kerosene storage including the following:

* * *

Section 15J, entitled "Miscellaneous Equipment," provided as follows:

7. Kerosene Transfer Pump

a. Provide a UL listed lightweight electric utility-type pump by Bennett, Tokheim, Wayne or approved equal similar to Bennett Model No. 57-8 pump. Include the following:

* * *

2. Evolution of Dispute

The 550 gallon kerosene tank mistakenly was not shown on the contract drawings although the requirement to furnish and install this tank underground was explicitly set forth in the specifications. (Tr. 167). After contract award, by letter dated September 22, 1980, Appellant questioned whether it was to provide the 550 kerosene tank not shown on the drawings. In the progress meeting of November 25, 1980 SHA informed Appellant that it had decided to delete the requirement for the underground kerosene tank. In its December 30, 1980 letter, SHA directed Appellant to delete the kerosene tank and to submit a proposed credit for SHA's evaluation. (Appeal File, Tab IV, B6). By letters dated January 8, 1981 and January 12, 1981, Appellant submitted a credit proposal in the amount of $1,202.00. (Appeal File, Tab IV, B7, B8). Appellant's estimate of the credit due the State was based on its assertion that it intended to substitute a less expensive tank than that brand name tank described in the specifications. It also maintained that it was not required to install the tank underground, even if it had to furnish it, since the location of the tank was not shown on the drawings. Appellant also objected to SHA's decision to assess a credit for the kerosene storage tank, and requested a final decision. (Appeal File, Tab IV, B7, B8).

In a final decision dated June 25, 1981 SHA determined that it was entitled to a credit for the cost of the kerosene storage tank since it was deleted from the contract requirements. SHA's claim as it stands before the Board is in the amount of $2,600.85 for deleting the kerosene tank and includes $313.30 for the cost of installation with overhead and profit included.

Decision - Kerosene Tank

Appellant maintains that SHA is not entitled to a credit for deleting the kerosene tank from the contract requirements because this equipment was not part of the scope of work since it was not shown on the drawings. The issue Appellant raises here rests substantively on the same ground as that raised by Appellant's claims for extra work for providing the tire changers and for providing pits for the truck lifts. That is, did Appellant have to furnish and install the kerosene tank described in the specifications but inadvertantly not shown on the drawings? We conclude that it did for the reasons set forth regarding both the tire changers and lift pits.

The provisions of this contract were required to be interpreted as a whole. They were complementary with each having meaning. (Art. 2a). Cam Construction Co., supra. Thus Appellant in formulating its bid could not lightly disregard the specifications which explicitly required the contractor to furnish and to install a kerosene tank even though it was not shown on the drawings. Since we conclude that the specifications bound Appellant to provide the kerosene tank, SHA is entitled to a credit under the contract's terms[11] where SHA deleted this requirement during contract performance. Here again, the requirement to provide a kerosene tank and associated pump was clear and obvious prior to the bid opening date. If Appellant had any doubts about what its obligations under the contract would be it was bound to resolve them with the SHA procurement officer. Northeast Construction Co. of West Virginia, supra.

Quantum

Appellant, on Eastern's behalf, is not entitled to additional compensation for making the water service connection, including the installation of the 8 inch water meter. However, Appellant is entitled to the amount of $2,600.00 for the permit fee Eastern paid to Annapolis for the privilege of connecting to the Annapolis water service system as offset by SHA's credit for the kerosene tank. (Tr. 38). The $2,600.00 paid by Appellant was a service and area charge that SHA was required to pay pursuant to Section 15A, para. 17. However, the contract does not permit overhead and profit on this amount. Section 15A, para. 17 required that these charges be paid directly by SHA. Accordingly, they were not part of the contract price to which these costs are customarily added.

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[11]General Conditions, Art. 11, entitled "Changes in the Work," provides in pertinent part as follows:

> "a. Should it be desired at any time, or times during the progress of work . . . to . . . delete work, the State shall have the undisputed right to make such changes, [or] omissions . . . by written order.
>
> * * *
>
> g. When . . . deductions . . . are so ordered, the value of such work will be determined in the following ways:
>
> * * *
>
> 4. If a change involves merely a credit, the Contract price will be reduced by the amount it would have cost the Contractor if the omitted item or work had not been eliminated; including over-head and profit, however, the Contractor and the Sub-Contractor will be allowed to retain a sum not in excess of three percent (3%) for handling.

We next turn to calculation of the amount SHA is entitled to for deleting the kerosene tank and associated kerosene transfer pump from the contract requirements. In this regard, the contract provided that if a credit to SHA is involved the contract price will be reduced by the amount it would have cost the contractor if the omitted item or work had not been eliminated. A credit for omitted work includes overhead and profit, although the contractor and subcontractor are entitled to retain an amount as a handling charge. (General Conditions, para. 11).

Here, Appellant had not proposed a substitute for the kerosene tank and kerosene transfer pump in accordance with the contract's provision at the time SHA deleted this equipment from the contract.[12] Thus the contract required Appellant to furnish as proprietary items the Owens Fiberglass Model D-5 kerosene tank and the Bennett Model No. 57-8 pump. Compare Dominion Contractors, Inc., MSBCA 1040 (May 20, 1982).

The record shows that the Owens Fiberglass Model D-5, 550 gallon kerosene tank reasonably would have cost $1,352.00. (SHA Exh. A; Appeal File, Tab IV, B7). There is no dispute that the kerosene transfer pump reasonably cost $320.00. (Appellant Exh. 2; SHA Exh. A.). We find that Appellant would have paid a 5% Maryland sales tax for the purchase of these items. (Appellant Exh. 2, p. 4).

Appellant's proof of costs did not contain an estimate of the labor and excavation costs for installing the kerosene tank underground. SHA, however, estimated that it would cost $169.04 to install the kerosene tank and pump based on its estimate that it would take a plumber and laborer each eight hours to do this work. SHA used the contract hourly labor rates to calculate the labor costs. (SHA Exh. A; Contract, p. 88 (Wage Rates)). SHA's cost estimate for labor included 25% of the labor costs for insurance and taxes normally used by Appellant when computing its labor costs. (Appellant Exh. 2, p. 4; SHA Exh. A, p. 2). SHA also estimated that it would have cost $102.00 for excavation to install the kerosene tank underground. (SHA Exh. A, p. 2). SHA's estimates were prepared in part by Mr. McDade, SHA's architect, who has had considerable experience in the construction field dating back to 1953. SHA's estimate of labor and excavation costs were not

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[12]The General Conditions provided:

> (8) Substitutions. Should the Contractor desire to substitute another material for one or more specified by name he shall apply, in writing, for such permission and state the credit or extra involved by the use of such material. The Architect will not consider the substitution of any material different in type or construction methods unless such substitution effects a benefit to the State (See (1) and (4) above). General Conditions, Art. 4, para. A(8).

It is clear that "material" included equipment such as the kerosene tank and kerosene transfer pump. Art. 4, para. A.

rebutted by Appellant. We therefore accept SHA's figures as reasonable. Compare Granite Construction Co., MDOT 1014 (December 20, 1983).

In this case, the contract establishes the subcontractor's overhead and profit at 20%. (SHA Exh. A, p. 2; Contract, Item 6, p. 21). The contractor's overhead and profit is 8%. (SHA Exh. A, p. 2; Contract, Item 7, p. 21). The contractor and subcontractor are entitled to retain not in excess of 3% of the estimated cost as a handling charge. (Appellant Exh. 2, p. 5; General Conditions, Art. 11, para. 4).

The amount SHA thus is entitled to as a credit for deletion of the kerosene tank and kerosene transfer pump is calculated as follows:

550 Gallon Kerosene Tank (Appellant's Exhibit 2; Appeal File, Tab IV, B7)			$1,352.00
Kerosene Transfer Pump (Appellant's Exhibit 2 (Exhibit G))			320.00
		Subtotal	$1,672.00
	Sales Tax at 5%		83.60
		Subtotal	$1,755.60
Labor (SHA Exhibit A)	$169.04		
Insurance and Tax Charges at 25%	42.26		
	$211.30		
			211.30
		Subtotal	$1,966.90
Excavation (SHA Exhibit A)			102.00
		Subtotal	$2,068.90
Overhead and Profit at 20% (SHA Exhibit A; Contract, Item No. 6, p. 21)			413.78
Overhead and Profit at 8% (SHA Exhibit A; Contract, Item No. 7, p. 21)			198.61
		Subtotal	$2,681.29
Less 3% Handling Charge (SHA Exhibit A; Contract, Item No. 4, p. 21)			80.44
		Total	$2,600.85

Based on the foregoing, Appellant's entitlement to $2,600.00 it paid as a fee to Annapolis for the privilege of connecting to that water system is to be offset by the credit of $2,600.85 SHA is entitled to as a credit for deleting the kerosene tank and transfer pump from the contract requirements.

For the foregoing reasons, therefore, the appeal is denied, except as to the $2,600.00 fee paid to the City of Annapolis. SHA's affirmative claim is sustained.

CONCURRING OPINION BY CHAIRMAN BAKER

Although I concur in Mr. Ketchen's decision, I do so for the following reasons.

I. Water Service

It is undisputed that the contract required water service to be brought to the SHA Office and Shop Complex and that Appellant was to provide at least that portion of the exterior plumbing which originated at the "leave" side of the meter. It likewise is uncontroverted that the 8 inch tap into the existing 14 inch water main located under Maryland Route 450 was to be performed by the City of Annapolis at a cost which contractually was to be borne by Appellant. What is at issue in this dispute, therefore, is the determination of contractual responsibility for (1) the furnishing and installation of all necessary piping, valves and fittings between the tap point

in the 14" water main and the meter to be located on SHA property, including the meter bypass, (2) the construction of the concrete vault required to house the meter, and (3) the furnishing and installation of the meter.

Beginning, in inverse order, with the question of contractual responsibility for the furnishing of the meter, Section 2F of the contract Specification, entitled "Water Service Connections and Metering," provides, in pertinent part, that:

> The Contractor will be responsible for providing all necessary water service connections and related meter installations, detailed on the plans and in these specifications, coordinating all work with the City of Annapolis Department of Public Works. [sic] The following detail sheets are for the contractor's use in performing this work. (Underscoring added).

One of the detail sheets which followed the foregoing provision contained a drawing of the standard installation for exterior plumbing of the type required here. (Cont., p. 145). This drawing was obtained by SHA from the City of Annapolis and included in the contract Specification without revision. The drawing contained the following note:

> Meter shall be furnished by A.A. Co.
> & installed by contractor.

The above portions of contract Specification Section 2F thus reasonably may be read together to require the contractor to install but not furnish the necessary water meter.

It is well recognized, however, that in ascertaining the true meaning of a contract, the contract must be construed in its entirety. Fruin-Colnon Corp. and Horn Construction Co., Inc., MDOT 1001, December 6, 1979. Here contract Specification Section 2F also included, as a detail sheet, a catalog cut of a "Hersey-Sparling" water meter suitable for use with an 8 inch water line installation. This catalog cut contained the manufacturer's name, a model number, and a sketch or xeroxed photograph of the meter when viewed from the side. Although no testimony was taken in this regard, the sketch or photograph did not appear adequate or necessary to assist a contractor in the installation of the meter. Unless the contractor was to furnish the brand name meter described in the catalog cut, therefore, it is difficult to understand why this information would be included in the contract.

Consistent with the foregoing conclusion, contract drawing SI-2 also contained the following notation:

> Complete water service by mechanical contractor including but not limited to connection at main in Route 450, entrance line, concrete meter box, meter and all necessary valves, piping and fittings for installation of meter and bypass. All in accordance with the requirements of Anne Arundel County.

While this language grammatically may be incorrect, it nevertheless conveys the requirement that a meter was to be furnished by the contractor. I conclude, therefore, that a conflict existed within the contract concerning Appellant's responsibility for furnishing the meter.

Appellant, however, contends that it reasonably construed the note on contract drawing SI-2 as requiring it to provide only that portion of the water service not furnished customarily by Anne Arundel County. In this regard, Appellant further states that, in its experience, a meter normally is furnished by Anne Arundel County under an agreement with the owner of the project being constructed. The cost of the meter under such an agreement is said to be considered a "service and area" charge which SHA here obligated itself to pay under contract Specification Section 15A, paragraph 17a.

Appellant's understanding of trade practice in Anne Arundel County and of the usage accorded to the term "service and area charge," even if correct, does not resolve the contract's internal inconsistency. The note on contract drawing SI-2 expressly stated that the meter was to be furnished by the mechanical contractor. Obviously, if Anne Arundel County was to furnish the meter by custom, the note on contract drawing SI-2 was meaningless.

In considering this issue of contract interpretation, the following two step analysis is required:

> . . . First, the court [Board] must ask whether the ambiguity was patent. This is not a simple yes-no proposition but involves placing the contractual language at a point along a spectrum: Is it so glaring as to raise a duty to inquire? [citation omitted]. Only if the court [Board] decides that the ambiguity was not patent does it reach the question whether a plaintiff's interpretation was reasonable. [citation omitted]. The existence of a patent ambiguity in itself raises the duty of inquiry, regardless of the reasonableness vel non of the contractor's interpretation. [citations omitted]. . . . The court [Board] may not consider the reasonableness of the contractor's interpretation, if at all, until it has determined that a patent ambiguity did not exist.

George E. Newsom v. The United States, No. 11-80 (Ct.Cl. Apr. 7, 1982), ___ Ct.Cl. ___ (1982); Mountain Home Contractors v. United States, 192 Ct.Cl. 16, 425 F.2d 1260 (1970). The initial question to be answered, therefore, is whether the conflict identified above was so glaring as to constitute a patent ambiguity.

"What constitutes a patent and glaring omission cannot . . . be defined generally, but only on an ad hoc basis by looking to what a reasonable man

would find to be patent and glaring." Rosenman Corp. v. United States, 182 Ct.Cl. 586, 590, 390 F.2d 711, 713 (1968). Generally, it is helpful to ask initially whether the contractor's interpretation does away with the contract's ambiguity or internal contradiction. George E. Newsom v. The United States, supra; The Brezina Construction Co., Inc. v. United States, 196 Ct.Cl. 29, 34, 449 F.2d 372 (1971). I conclude, for reasons previously stated, that it does not.

The foregoing notwithstanding, Appellant argues that any discrepancy existing here could not have been detected without close study of the contract and thus must be considered subtle. I again disagree. Contract Specification Section 2F alone set forth conflicting requirements pertaining to the furnishing of a meter. While a requirement to purchase the meter expressly was not set forth under this section, the inclusion of the Hersey-Sparling catalog cut, at a minimum, raised a flag for Appellant's estimators. Certainly, if Anne Arundel County was to furnish the meter, Appellant would not have needed to know its make and model number. This especially is true where, as here, Appellant also is contending that it likewise did not have responsibility for installing the meter and water service thereto.

Appellant finally contends that the cost of the meter was small in comparison to its subcontractor's bid amount and, for this reason, any discrepancy could not be considered glaring. While courts and boards have considered relative cost as an element in determining whether a discrepancy is subtle, it never has been the sole determinative factor. Mountain Home Contractors v. The United States, 192 Ct.Cl. 16, 425 F.2d 1260 (1970); Gall Landau Young Construction Company, Inc., ASBCA No. 21549, 77-1 BCA ¶12,515. Where the facts at hand otherwise demonstrate that an omission or inconsistency is blatent, the duty of inquiry arises, regardless of the cost of the item in dispute.

The importance of the doctrine of patent ambiguity has been summarized by the U.S. Court of Claims as follows:

> . . . If a patent ambiguity is found in a contract, the contractor has a duty to inquire of the contracting [procurement] officer the true meaning of the contract before submitting a bid. [citations omitted]. This prevents contractors from taking advantage of the Government; it protects other bidders by ensuring that all bidders bid on the same specifications; and it materially aids the administration of Government by requiring that ambiguities be raised before the contract is bid on, thus avoiding costly litigation after the fact.

George E. Newsom v. The United States, supra; see also Assurance Company, ASBCA No. 25254, 83-2 BCA ¶16,908. In the absence of an inquiry here, therefore, the discrepancy concerning the furnishing of the meter must be construed against Appellant. Beacon Construction Co. v. United States, 161 Ct.Cl. 1, 7, 314 F.2d 501, 504 (1963); Jamsar, Inc. v. The United States, 194 Ct.Cl. 819, 442 F.2d 930 (1971).

It further is noted that Appellant's estimator testified that he contacted both the City of Annapolis and Anne Arundel County prior to bid to inquire as to whether they would be furnishing a meter. (Tr. 97, 101). The only possible explanation for these inquiries is that the estimator was

unsure of his company's contractual responsibility for the meter. Thus, before putting an amount for the purchase of a meter in his competitive bid, the estimator sought clarification from the municipalities with whom he expected to deal directly when installing the water service.

"The question of whether an ambiguity is patent is only relevant where the contractor was not aware of it, and the court [or board] is called upon, in retrospect, to decide whether or not he should have been aware of it." James A. Mann, Inc. v. The United States, 210 Ct.Cl. 104, 535 F.2d 51 (1976). Where a contractor has knowledge of an ambiguity prior to bid, the duty to seek clarification from the procurement officer automatically arises. Id. at p. 123. When the invitation for bid, as it did here, instructs bidders to request clarification of ambiguities prior to bid and apprises them that the failure to do so will result in a waiver of further claims, this principle especially is binding. Compare Beacon Construction Co. v. United States, 161 Ct.Cl. 1, 6-7, 314 F.2d 501, 504 (1963). Accordingly, even if it reasonably could be said that a patent ambiguity did not exist with regard to the contractual responsibility for the water meter, Appellant still had a duty to seek clarification, not from Anne Arundel County and the City of Annapolis, but from the SHA procurement officer.

Turning to the remainder of the disputed portions of the water service, both contract Specification Section 2F and the note on contract drawing SI-2 required Appellant to provide all necessary water service connections. In performing this work, Appellant contractually was directed to refer to the detail sheets contained in Specification Section 2F. One of these detail sheets set forth a design for the concrete meter vault, meter supports, specifications for required fittings, pipes and valves, and a schematic of the piping layout. (Contract Spec., p. 145). Appellant further was instructed in contract Specification Section 2F to contact the Annapolis Deputy Engineer before commencing the water service connections described on these detail sheets. In my view, a reasonable contractor could not have construed the foregoing language and drawings to require anyone other than itself to construct the concrete meter vault and furnish and install the necessary water service connections between the meter and the water main.

Appellant contends that it was led astray by contract Specification Section 15A, paragraph 17a which made SHA contractually responsible for service and area charges. However, even if we accept the testimony of Appellant's witnesses, Messrs. High and Miskelly, that the term "service and area charges" is understood in the trade to include the cost of furnishing and installing water service from a water main to the meter, at best we have a glaring inconsistency within the contract Specification. For reasons already stated, Appellant had a duty, when faced with this inconsistency, to make inquiry prior to bid. Failure to discharge this duty leaves it contractually responsible for furnishing and installing the water service connections.

II. Truck Lift Pits (Trenches)

Contract Specification Section 15J, paragraph 2 required Appellant to "provide" two twin post heavy-duty truck lifts having an adjustable wheel base range of 102 to 202 inches. Appellant concedes that it was required to furnish this item but denies that it further was obligated to construct masonry pits to house the truck lift foundations. In this regard, the parties have stipulated that neither pits nor trenches essential to truck lift

installations were shown on the contract drawings. Accordingly, Appellant maintains that it reasonably construed the contract to require installation of the required truck lifts directly upon the SHA garage floor. (App. Post-hearing Brief, p. 8).

Within the mechanical section of the contract Specification (Section 15), the term "provide" is defined to mean "furnish and install." (Contract p. 307). Section 15A of the contract Specification further states that:

> The work of all Sections of Division 15 includes furnishing and installing the material, equipment and systems complete as specified therein and indicated on drawings. Mechanical work, when finished, shall produce a complete and coordinated installation ready for satisfactory service. (Underscoring added).

Here Appellant's estimator admitted that the truck lifts, if installed without a pit, could not have provided the adjustable base range mandated by contract Specification Section 15J. (Tr. 111, 113). Appellant's understanding of the contract installation requirements, therefore, would not have resulted in a complete and coordinated installation ready for satisfactory service.

Other portions of contract Specification Section 15J further indicated that a pit[13] was required as part of the truck lift installation. First, paragraph 2e stated that "[c]over plates move with the carriage to maintain a cover over the trench at all times." Second, paragraph 2n required Appellant to furnish Weaver Model No. 106-BM truck lifts, or an accepted equal. Appellant, in fact, elected to provide this brand name and model lift. The manufacturer's specifications for the Weaver lift contained construction details of the masonry pit necessary to house the foundation of the truck lifts. A review of these specifications would have apprised Appellant of the need to construct masonry pits for the lifts. In this regard, Article 4 of the contract General Conditions provided, in pertinent part, that:

> A. Materials include all manufactured products and processed and unprocessed natural substances required for completion of the Contract. The Contractor, in accepting the Contract, is assumed to be thoroughly familiar with the materials required and their limitations as to use, and requirements for connection, setting, maintenance and operation. Whenever an article, material or equipment is specified and a fastening, furring connection (including utility connections), or access hole, flashing closure piece, bed or accessory is normally considered essential to its installation in good quality construction, such shall be included as if fully specified. Nothing in these specifications shall be interpreted as authorizing any work in any manner contrary to applicable laws, codes or regulations. (See ART. 7). (Underscoring added).

Thus, regardless of whether Appellant took the time to familiarize itself with the installation requirements of the specified truck lifts, it obligated itself, under this language, to provide the masonry pits essential to the function and installation of the truck lifts.

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[13]The terms pit and trench are used interchangeably.

The contract Specifications and drawings are complementary.[14] In view of my conclusion that the contract Specifications adequately apprised Appellant of its responsibility to construct masonry pits to house the truck lift foundations, I necessarily find Appellant's interpretation of the contract, as it regarded the construction of masonry pits, to be unreasonable.

It is not difficult to see how the foregoing dispute evolved. Appellant's mechanical subcontractor bid that portion of the truck lift work normally attributable to a mechanical contractor, namely the furnishing and installation of the truck lifts. Masonry work, being outside of the mechanical subcontractor's normal responsibilities, was not included in its bid. Appellant's masonry subcontractor, without seeing the truck lifts on the drawings and being unfamiliar with the truck lift specifications, apparently did not know to bid the construction of the lift pits as part of its work. Whatever confusion arose here, however, it was Appellant's responsibility to assure that all work required by the contract was furnished. Appellant is not relieved of this responsibility by virtue of its subcontractors' failure to coordinate and identify all essential contractual requirements. Gall Landau Young Construction Company, Inc., supra.

III. Tire Changers

Appellant concedes that it contractually was required to "provide" both an electric-hydraulic truck tire changer and a pneumatic automotive tire changer under contract Specification Section 15J, paragraphs 4 and 5. Installation instructions, however, were not set forth either in the contract Specification or drawings. Appellant concluded, therefore, that since the contract did not contain enough information to permit computation of the installation costs, it did not have contractual responsibility for performing such work. (App. Post-hearing Brief. p. 9).

As I earlier stated with regard to the truck lifts, the term "provide" is used in the contract mechanical Specification to mean furnish and install. Furnishing truck and automotive tire changers to the SHA facility without installing them not only would have been inconsistent with the requirement to "provide" these items, but further would have been contrary to contract Specification Section 15A, paragraph 2a which requires work set forth within the mechanical section of the contract to produce a complete and coordinated installation ready for satisfactory service. Accordingly, installation of the tire changers was a contractual requirement which Appellant improperly ignored.

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[14]Article 2 of the contract General Conditions states that:

> The contract Documents (See Art. 1. par. a) are complementary. That which is called for by any one shall be as binding as if called for by all.

See Cont. Spec., p. 8. The Contract Documents include the drawings and Specifications. See Cont. Spec., p. 6.

Assuming, arguendo, that it reasonably may be said that additional information was necessary for Appellant to prepare its bid, this was recognizable to Appellant prior to bid. Under such circumstances, it had a duty to seek clarification from the SHA procurement officer before bidding. James A. Mann, Inc. v. United States, supra. By ignoring the installation requirement and failing to inquire, Appellant assumed liability for its erroneous interpretation.

IV. Kerosene Tank

It is undisputed that the contract Specifications required Appellant to provide an Owens Fiberglass Model D-5, or approved equal, underground kerosene storage tank and a Bennett Model No. 57-8, or approved equal, kerosene transfer pump. The record does not indicate that Appellant obtained approval from SHA to use another tank or transfer pump considered equal to the brand name models specified. Accordingly, I find that Appellant contractually was bound to provide the Owens Fiberglass tank and the Bennett transfer pump called for in the mechanical Specification. See Dominion Contractors, MSBCA 1040 (May 20, 1982).

When SHA deleted the kerosene tank and transfer pump from the contract, it sought a credit for the cost of furnishing and installing these specific items pursuant to Article 11g of the contract General Conditions. This provision states, in pertinent part, that:

> 4. If a change involves merely a credit, the contract price will be reduced by the amount it would have cost the Contractor if the omitted item or work had not been eliminated; including over-head [sic] and profit, however, the Contractor and the Sub-Contractor [sic] will be allowed to retain a sum not in excess of three percent (3%) for handling.

Under this guideline, SHA now computes the credit at $2,600.85.

Appellant concedes that a credit is due for the cost of the kerosene tank and pump. It contends, however, that during performance it intended to substitute a less expensive, but functionally equivalent, tank for the model specified in the contract. Without restating the Board's reasoning as set forth in Dominion Contractors, MSBCA 1040, supra, the substitutions clause contained under Article 4A(8) of the contract General Conditions would have permitted the State to take a credit for the difference in price between the brand name tank specified and any equivalent item offered after contract award. Put another way, Appellant would not have been able to reap the benefits of any cost savings realized in furnishing a less expensive tank approved for use after award. Accordingly, the credit for the kerosene tank must be determined based upon the reasonable cost of the specified Owens Fiberglass Model D-5 tank.

As to the installation costs, Appellant contends that it was not responsible for any work in this regard because the location of the kerosene tank was not shown on the contract drawings. This argument, being identical to that raised by Appellant under the "tire changers" claim, is rejected without further comment.

Appellant finally argues that the issue of installation costs is not part of the dispute before the Board. In this regard, Appellant states that the SHA procurement officer's final decision settled the matter by concluding that installation costs should not be part of the credit sought. I disagree. A procurement officer's final decision becomes binding only in the absence of a timely appeal. Once such an appeal is taken, the final decision becomes a nullity and consideration by this Board of the issues addressed therein is de novo. Hensel Phelps Construction Company, MSBCA 1167 (January 20, 1984).

For all of the foregoing reasons, Appellant's claim is denied, except as to the $2,600 permit fee which the parties agree was a "service" charge. I concur in Mr. Ketchen's evaluation of the remaining quantum aspects of the appeal.

SIZE	A	B	C	BY PASS SIZE
4"	4'-6"	5'-6"	3'-0"	4"
6"	5'-6"	6'-0"	2'-8"	4"
8"	6'-0"	7'-0"	2'-4"	6"
10"	7'-0"	8'-6"	2'-0"	6"

TOP AND BOTTOM SLABS SHALL BE REINFORCED CONCRETE. WALLS SHALL BE 12" BRICK, 12" PLAIN CONCRETE OR 8" REINFORCED CONCRETE.

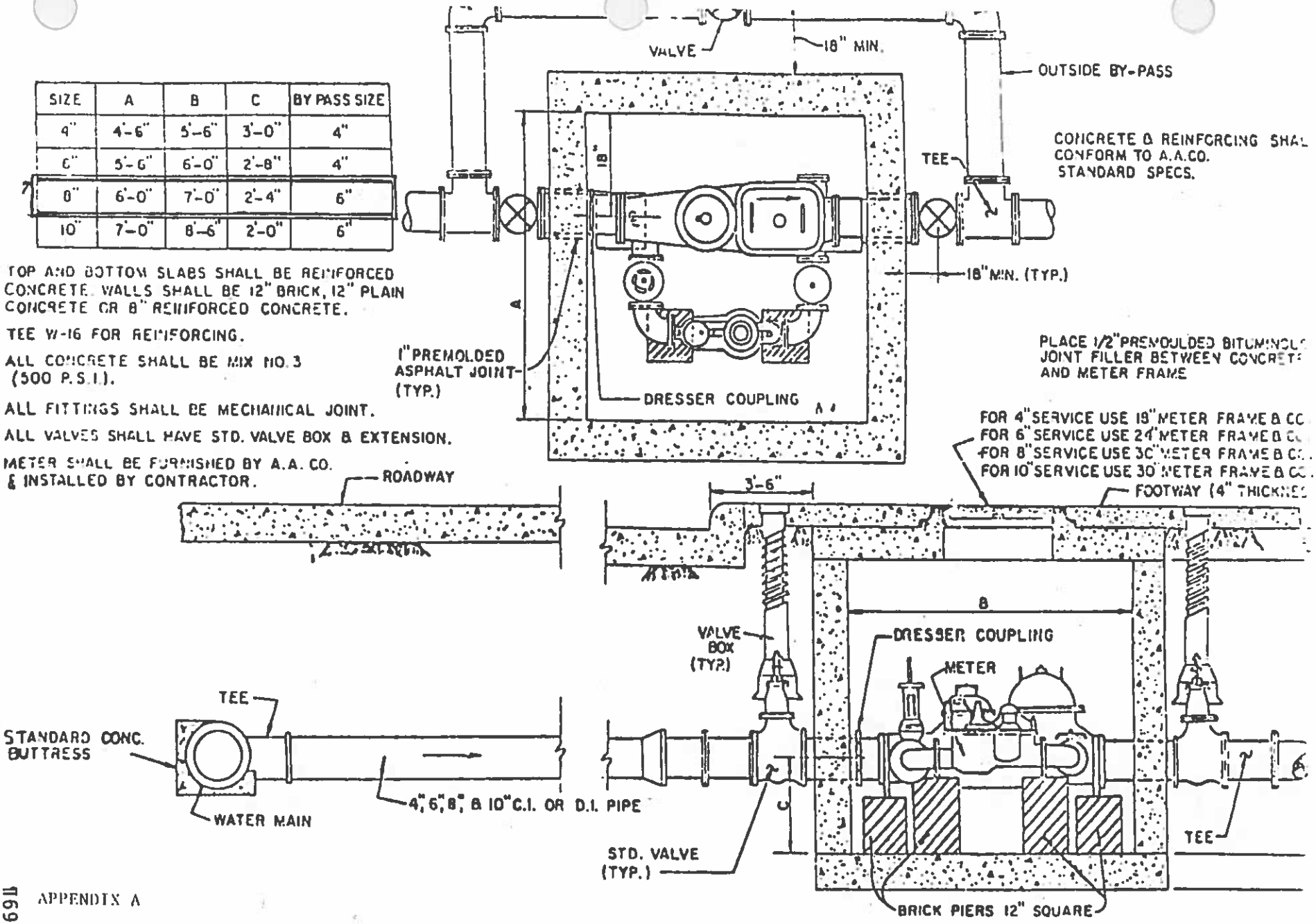
TEE W-16 FOR REINFORCING.

ALL CONCRETE SHALL BE MIX NO. 3 (500 P.S.I.).

ALL FITTINGS SHALL BE MECHANICAL JOINT.

ALL VALVES SHALL HAVE STD. VALVE BOX & EXTENSION.

METER SHALL BE FURNISHED BY A.A. CO. & INSTALLED BY CONTRACTOR.



STANDARD WATER DETAILS
STANDARD INSTALLATION 4", 6", 8" & 10"
L45 FIRE SUPPLY SERVICE
OUTSIDE FIRE HYDRANTS

REVISED
9/3/69 R.H.
9-1-77
5/14/79 CDS

W/30