ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of --	)	
	)	
David Boland, Inc.	)	ASBCA Nos. 51259, 51359
	)	
Under Contract No. DACA01-94-C-0228	)	

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OPINION BY ADMINISTRATIVE JUDGE LANE
UNDER BOARD RULE 11

These are timely appeals from a contracting officer's decision denying appellant's requests for equitable adjustments of $128,655 for installation of extra modular furniture outlets and $24,741 for the higher cost of plenum-rated communications cable. The parties have submitted these appeals for decision on the record under Board Rule 11. Only entitlement is to be decided.[1]

The outlet claim involves interpretation of certain symbols on the contract drawings. We conclude that the drawings were arguably erroneous in identifying the symbols in issue, but that any error was obvious and appellant should have seen it.

The cable claim arises out of the Government's failure to identify the above-ceiling space as a plenum on the voice/data communications drawings as well as on the mechanical drawings or to expressly require plenum-rated voice (telephone) and data communications cable, or at least cross-reference the mechanical drawings on the communications drawings. We conclude that appellant as the prime contractor should have known from all the drawings that the above-ceiling space was a plenum which it knew required plenum-rated cable.

We deny the appeals.

FINDINGS OF FACT

1. On or about 28 September 1994, the Department of the Army awarded appellant Contract No. DACA01-94-C-0228. It was a firm fixed-price contract in the amount of $14,045,000 for construction of a Soldier Service Support Center at Fort Rucker, Alabama. The work included networking and installing a telecommunications system. The telecommunications work included installing telecommunications outlets and cabling throughout the project. (Compl. & ans. ¶ 8; app. br. FF 1-3; Gov' t br. FF1; undisputed)

2. Shortly thereafter, appellant entered into a subcontract with Henderson Electric, Heat and Air Conditioning, Inc. for all the on-site electrical and telecommunications work, incorporating by reference into the subcontract the prime contract specifications and drawings (compl. ¶ 9; Skubel affid., AR4, tab X, ¶ 2; app. br. FF4; undisputed).

3. On or about 14 February 1995, Henderson entered into a second-tier subcontract with Johnson Controls Network Integration Services, Inc. ("JCNIS") (now Vista Network Integration Services, Inc.) for the telecommunication network integration and installation work. This subcontract work included performance of the outlet and cable installation work that is the subject of these claims. JCNIS is the real party in interest in these appeals. (Compl. ¶ 10; Skubel affid., AR4 tab X, ¶ 2; AR4, tab O; app. br. FF5; undisputed)

4. There is no evidence that any bidders sought clarification of the specifications or drawings concerning the number of modular furniture outlets required or the type of cable required above the laid-in ceiling of the facility.

5. (a) Mr. Frank Skubel, Jr. is a senior project manager with Vista (formerly JCNIS) who had the responsibility for JCNIS's performance of the work under the second-tier subcontract in this case. He had ultimate decision-making authority with respect to JCNIS's performance and was informed about its day-to-day operations at the project. On that basis, he asserts personal knowledge of the facts stated in his affidavit. (Skubel affid., AR4, tab X, ¶ 2)

(b) Mr. Skubel states in his affidavit, with respect to the disputed outlets:

> . . . Boland [appellant, the prime contractor] concluded that the contract required that 290 Modular Furniture Outlets be installed, and, accordingly, Boland's bid price included the costs for installing only 290 Modular Furniture Outlets.

(Skubel affid., AR4, tab X, ¶ 11)

(c) Mr. Skubel similarly states in his affidavit, with respect to the disputed cable:

> Boland interpreted the Contract Drawings and Specifications as not requiring that plenum cable be used for the communications cables in the ceilings. As such, Boland's bid price for the communications wiring did not include the price of plenum cable, which is substantially more expensive than non-plenum cable.

(Skubel affid., AR4, tab X, ¶ 23)

(d) Mr. Skubel (a second-tier subcontractor employee) in his affidavit does not demonstrate any factual basis for personal knowledge of how appellant, the prime contractor, calculated its bid, other than his conclusory assertion of personal knowledge of all the facts he states. Nor is there any corroborating evidence, such as bid work sheets or testimony to show (i) what appellant included in its bid and that the claimed costs were in fact omitted, or (ii) that appellant actually interpreted the drawings the way it now says they should be or based its bid on a quote or bid from a subcontractor who did so, rather than omitting the claimed costs simply by mistake.

(e) We conclude that there is no persuasive evidence to support findings that appellant relied on its asserted interpretations of the drawings and did not include in its bid the costs of the allegedly extra outlets and of the plenum-rated cable or that when pricing its own bid to the Government it relied on the bid of a subcontractor who relied on the asserted interpretations when bidding to appellant.

ASBCA No. 51259 -- Voice/Data Outlets

6. The contract work included cable systems for both voice and data communications. The contract drawings and specifications required that the cables for the modular furniture outlets be installed in an "under-floor raceway" (or cellular deck) system, which, in turn, was to be embedded in the concrete floors in grid arrangements. At various locations on the raceway system, "Tapmate" (a brand name) floor outlet access boxes were to be installed. The cables connected to the voice and data outlets in the modular furniture system ran through these Tapmate boxes. (Skubel affid., AR4, tab X, at 2; Shockley affid., R4, tab 35, at 2)

7. The symbol for a Tapmate box is shown on drawings W411 and E202. It consists of a square containing two solid black triangles, apex to apex. (R4, tab 16; Shockley affid., R4, tab 35, attach. 6) Appellant and the Government agree that this symbol represents a Tapmate box (Skubel affid., AR4, tab X, at 6; Shockley affid., R4, tab 35, at 3).

8. The "Voice/Data Communications" drawings relevant to this appeal are drawings V01 through V07, V09, and V015 (R4, tabs 8-15, 19).

9. (a) Drawings V01 through V06 are titled "Communications Outlet Locations." Note 1 thereon reads: "THE TAPMATE OUTLET BOXES ARE BEING INSTALLED VIA THE ELECTRICAL DRAWINGS AND SPECIFICATIONS." (R4, tabs 8-13).

(b) Drawings V01 through V06 show in many places what are unmistakably chairs in front of workstation tables, even though the chair and table illustrations are not expressly identified as such. At every workstation location, there is a solid black triangle connected by a black line (following the contours of the partitions) to the symbol for a Tapmate box. In some cases only one solid black triangle is shown connected to a particular Tapmate box; in other cases, many are shown. (R4, tabs 8-13)

10. (a) Drawing V01 contains a "Symbol Legend," which is a list of symbols and definitions of what they mean. It includes five symbols relating to outlets. (R4, tab 8)

(b) Four of the symbols (not in dispute here) consist of a black line connected to a solid black triangle, each with a different letter next to it to identify and differentiate four different types of wall outlets. The Symbol Legend does not include a symbol consisting solely of a black line connected to a solid black triangle without a letter next to it. (R4, tab 8)

(c) The fifth symbol relating to outlets, which is the one in dispute, consists of a Tapmate box symbol connected by a black line to a solid black triangle without a letter next to it. The definition of that symbol states:

> MODULAR FURNITURE OUTLET – OUTLET IS EQUIPPED WITH ONE 8 PIN MODULAR JACK FOR DATA, ONE 6 PIN MODULAR JACK FOR VOICE AND TWO ST CONNECTORS FOR FIBER OPTICS. OUTLET IS FED FROM TAPMATE CONDUIT SYSTEM.

(R4, tab 8)

11. According to appellant's interpretation that only one modular furniture outlet was required for each Tapmate box symbol, no matter how many solid black triangles were connected to it, drawings V01 through V06 required 290 modular furniture outlets (R4, tab 4; Skubel affid., AR4, tab X, at 3). In its transmittal No. 170 to the Government on 27 March 1996, appellant included this count of 290 modular furniture outlets (plus 43 other voice and data outlets for a total of 333) (R4, tab 4; AR4, tab G; app. br. FF 21; Gov' t br. FF 6; undisputed).

12. (a) In response to appellant's submittal and in subsequent discussions, the Government took the position that the contract drawings required 517 modular furniture outlets (plus the 43 other voice and data outlets required, for a total of 560 outlets), which was 227 more than appellant said were required (R4, tabs 6-7; app. br. FF 22; Gov' t br. FF 6; undisputed).

(b) The Government stated:

> Original contract electronic sheet reference drawings V01 through V06 clearly indicate more than one modular furniture voice/data outlet rising out of the cellular floor system access box (TAPMATE) in many locations. Each triangular symbol indicated to rise out of each TAPMATE box is an indication of a required modular furniture voice/data outlet.

(R4, tab 7)

13. The Government in its response to appellant's submittal and orally in a 9 October 1996 meeting directed appellant to install 517 modular furniture outlets. JCNIS, the second-tier electrical subcontractor, confirmed this directive in writing to the first-tier subcontractor by letter of 19 October 1996, and advised that it would comply under protest and regarded the directive as a compensable change. (R4, tabs 6-7; AR4, tabs C-D; app. br. FF 23-27; undisputed)

14. It is undisputed that pursuant to the Government's directive through appellant, JCNIS subsequently did install 517 modular furniture outlets, which was 227 more than the 290 which it asserts the contract required. We need not find the exact cost of the allegedly extra outlets.

15. On 10 March 1997, appellant submitted a claim for $128,655 and requested a contracting officer's final decision (R4, tab 4).

16. On 6 October 1997, the contracting officer issued a final decision denying the claim in its entirety (R4, tab 2). Appellant timely appealed by letter of 18 December 1997.

ASBCA No. 51359 Plenum Cable

17. (a) Specification section 16741, paragraph 3.1 states, among other things: "Installation work shall be done in accordance with the safety requirements set forth in the general requirements of NFPA 70" (which is the National Electrical Code promulgated by NFPA, formerly the National Fire Protection Association) (R4, tab 24).

(b) According to NFPA 70, plenum-rated cable (which has "adequate fire-resistant and low-smoke producing characteristics") must be used in all "ducts, plenums and other space used for environmental air" (R4, tab 33, Article 800, §§ 800-50, 800-51(a)).

(c) NFPA 70 may include a definition of "plenum," but the definitions portion of NFPA 70 was not included in the record. Federal Standard 1037C, "Telecommunications: Glossary of Telecommunications Terms," dated 7 August 1996, published by the Information Technology Service of the General Services Administration, defines "plenum" as follows: "In a building, an enclosure, created by building components such as a suspended ceiling or false floor, and used for the movement of environmental air." (See ITS Web site www.its.bldrdoc.gov/fs-1037/gifs/37c-cov.gif.) Whether or not this 1996 definition is precisely that which was incorporated into the 1994 contract before us, it is clear in the record that everyone concerned understood the requirements of NFPA 70 and understood the term "plenum" essentially as so defined.

(d) It is undisputed that the specifications had no provisions related to the use of plenums for return air and did not require the use of plenum-rated cable other than by the general requirement for compliance with NFPA 70.

18. (a) The contract requirements for voice and data communications outlets and cabling were shown on the voice/data communications drawings (drawings V01-V07, V09, V15, R4, tabs 8-15, 19).

(b) The contract requirements for heating, ventilation, and air conditioning were shown on the mechanical HVAC drawings (drawings M-2 through M-7, R4, tabs 27-32).

19. (a) Voice/data communications drawings V01 through V06 depict the "Communication Outlet Locations." These drawings do not show conduit or cable routing. (R4, tabs 8-13)

(b) Drawing V07 shows a "Voice/Data Communications Cable Riser Diagram." It shows a typical ceiling line on each floor and some communication wiring passing through the area above the ceiling. (R4, tab 14)

(c) Drawing V09 includes typical details for wall-mounted outlets. The details show conduit running from the outlet boxes up to the ceiling and conduit stub-outs projecting just above the ceiling. (R4, tab 19)

(d) We therefore find that, while it is not clear whether all communications cabling was required to be run through the plenum, much of it was, contrary to the Government's assertion that running cabling through the plenum was entirely appellant's voluntary choice.

(e) We further find, based on the absence of any assertion or evidence to the contrary, that the voice/data communications drawings did not expressly require appellant to use plenum-rated cable in the above-ceiling space and contained no cross-reference to the HVAC drawings for information as to the use of the above-ceiling space as a plenum and no indication that any of the above-ceiling space would or might be a plenum.

20. We find, based on the absence of any assertion or evidence to the contrary, that the HVAC drawings also did not expressly require appellant to use plenum-rated cable in the above-ceiling space.

21. (a) HVAC drawing M-2 included the following in the "GENERAL NOTES":

> 3. ALL RETURN AIR DUCTWORK AND FITTINGS SHALL BE RATED FOR 2" STATIC PRESSURE (W.C.)
>
> . . . .
>
> 6. ALL RECTANGULAR/SQUARE DUCTWORK DOWNSTREAM OF THE VAV TERMINAL UNITS AND ALL RECTANGULAR/SQUARE RETURN AIR DUCTS SHALL BE INTERNALLY INSULATED WITH 1" THICK ACOUSTICAL DUCT LINER.

(R4, tab 27)

(b) Neither party has identified for the Board which ductwork on the HVAC drawings is for return air. However, we have found several locations where HVAC drawing M-2 shows *wall* return air grilles feeding into return air ductwork (*e.g.*, R4, tab 27, locations B5|6, B11, B|C5, D5, E5, F8, G3|4). The illustration at location D5, for example, is identified as follows: "48x24 WALL R.A. GRILLE & DUCT SLEEVE." The illustration at location B5|6 is identified as follows: "30x16 RELIEF AIR DUCT W/ BAROMETRIC DAMPER & 30X16 WALL R.A. GRILLE."

(c) We find that the HVAC drawings require at least some return air ductwork to carry return air from return air grilles in certain *walls*.

22. (a) Appellant has not identified and we have not found any locations where the HVAC drawings show *ceiling* return air grilles feeding into return air ductwork. On the contrary, the Government correctly asserts that there are many locations where the HVAC drawings show ceiling return air grilles feeding into the above-ceiling area without ductwork. We have identified a number of such locations (*e.g.*, drawing M-3, R4, tab 28, locations P13 ("48x24 CLG. R.A. GRILLE"), S12 & S13 ("(3) 12X12 CLG. R.A. GRILLES"); drawing M-4, R4, tab 29, location K7 ("24x24 CLG. R.A. GRILLE –

TYPICAL"). The symbol at location K7 on drawing M-4 consisting of a square bisected by a diagonal line, and identified as "24x24 CLG. R.A. GRILLE – TYPICAL," also appears at many other locations on drawings M-4 through M-7 without ductwork (R4, tabs 29-32).

(b) Moreover, we have found a number of locations where the HVAC drawings expressly and quite prominently (at the perimeter of the depiction of the building on each drawing surrounded by ample white space, not buried in the middle of each drawing) refer to an "R.A. PLENUM" (that is, return air plenum) (*e.g.*, drawing M-3, R4, tab 28, locations Y15|16 ("48x20 RELIEF AIR DUCT WITH BAROMETRIC DAMPER – STUB INTO R.A. PLENUM & CONN. TO SOFFITT GRILLE"), P21, U21; drawing M-4, R4, tab 29, location K7; drawing M-5, R4, tab 30, locations Y16|17, P21; drawing M-6, R4, tab 31, locations H2, K6|7; drawing M-7, R4, tab 32, locations D1, D2).

23. We find that while ductwork was used for return air from wall grilles in some locations, the HVAC drawings made it clear, contrary to appellant's assertion that the contract did not provide for a plenum above the ceilings, that most if not all of the above-ceiling space was to be a return air plenum, identified as such in some locations expressly by use of the term "R.A. PLENUM" and in many other locations by identification of ceiling grilles as "R.A. GRILLE" where there was no ductwork above the grilles. We further find that this was so plain on the HVAC drawings in this case that at least the appellant, as the prime contractor and general contractor for construction of the entire building, had to know or should have known that most if not all of the above-ceiling space was a plenum for return air.

24. The second-tier subcontractor's (JCNIS's) senior project manager states in his affidavit with respect to industry custom:

> 32. Based on my professional knowledge and substantial experience in the telecommunication network integration industry, it is my opinion that it is the custom in the telecommunication network integration industry for a contract drawing to specifically identify each area that will require the use of plenum cable for voice and data communications. The requirement for plenum cable generally is written or annotated directly upon the drawing that indicates where such cable will be located.
>
> 33. Conversely, it also is an industry custom that plenum cable will <u>not</u> be used for voice and data communications unless contract drawings and/or specifications expressly require the use of plenum cable.

(Skubel affid., AR4, tab X) Those statements are appellant's only evidence of usage of trade or industry custom in the present record.

25. Specification section 16741, "Telephone System, Inside Plant" (which presumably applies to data cabling as well as voice cabling, since they apparently were run together and the parties have made no distinction between the two), provides in pertinent part:

> 1.5 SUBMITTALS
>
> Government approval is required for submittals with a "GA" designation. . . . The following shall be submitted in accordance with Section 01300 SUBMITTAL DESCRIPTIONS:
>
> . . . .
>
> SD-04 Drawings
>
> Telephone System; GA.
>
> Provide detail drawings. . . . The detail drawings shall contain complete wiring and schematic diagrams. . . . System drawings shall show the final configuration, including location . . . of inside wiring. . . .
>
> . . . .
>
> 3.2 INTERIOR WIRING
>
> Interior wiring shall be installed in raceways, cable trays, and boxes as specified in Section 16415 ELECTRICAL WORK, INTERIOR, and terminated at station locations indicated. The wiring shall take the form of a "Universal Wiring Plan" where station cables are wired directly, home run fashion, from a distribution point to the appropriate modular jack plate, jack assembly, or floor jack. . . . Station cables shall not be installed in the same cable tray, utility pole compartment, or floor trench compartment with ac power cables. Station cables not installed in conduit or wireways shall be properly secured and neat in appearance.

(R4, tabs 24-25, 34)

26. On 13 October 1995, appellant submitted to the Government a "request for information" forwarding a 12 October 1995 letter from JCNIS (the second-tier communications subcontractor) requesting a written response to a number of points discussed at a 29 September 1995 coordination meeting between the Government and the prime contractor and the first- and second-tier subcontractors. One question asked: "Are the communications cables of wall mounted communications outlets, which run through the ceiling, to be plenum rated cables?" (R4, tabs 20, 21)

27. In its 21 November 1995 response, the Government stated:

> (e) The NFPA 70, National Electric Code, requires that cables installed in air plenums be plenum rated cable. The contractor is responsible for installation in accordance with the NEC by 16741-3.1. Note that other cable markings may be required in other spaces such as type CMR for riser cables. See NEC article 800-50, 800-51, and 800-52 for cable listing/marking and installation requirements.

(R4, tabs 20, 22)

28. Appellant's transmittal to the Government on 27 March 1996 included a materials list which identified only cabling suitable for placement in a riser area (Type CMR cable). The transmittal did not include any plenum-rated cable (Type CMP cable). (R4, tabs 5, 33; AR4, tab G)

29. The Government's 29 May 1996 response stated:

> 4. Any and all cabling above ceiling shall be plenum rated cable (CMP) or be installed in conduit. Only type CMR riser cable was indicated in submittal.
>
> . . . .
>
> 14. . . . Above ceiling is return air plenum; therefore, most if not all of the riser cables are required to be minimum of CMP if installed without conduit as indicated on the detail drawing submitted.

(R4, tab 6, at 2-3)

30. The Government's position was repeated in a transmittal dated 4 October 1996, which read, "7. The 200 pair UTP copper cabling between communications closets pass

through areas of above lay in ceiling return air and are required to be plenum rated. . . . 8. Fiber Optic cabling above ceiling is also required to be plenum cable." (AR4, tab C)

31. In correspondence dated 19 October 1996, appellant's second-tier subcontractor JCNIS stated it would install plenum-rated cable as the Government directed, but under protest and in expectation of compensation for a change order (AR4, tab D, at 2, ¶ 7). It is undisputed that JCNIS did so (Skubel affid., AR4, tab X, ¶ 30). We need not find the exact higher cost of the plenum-rated cable.

32. On 3 March 1997, appellant submitted a claim for $24,741 to the Government for the alleged increased cost of the plenum-rated cable and requested a contracting officer's final decision (R4, tab 3).

33. On 16 July 1997, the Chief of the Construction Division of the Corps of Engineers Mobile District wrote to appellant, explaining why the Army found no merit in the claim. He said:

> d. JCNIC [sic] has been in the communications business for many, many years and is familiar with the NFPA and NEC Articles and requirements. . . .
>
> . . . .
>
> . . . The subcontractor, JCNIS, states that he did not receive the mechanical drawings during the bidding. This restricted his understanding of the building's HVAC system operation and probably caused him to be unaware of the plenum space above the ceiling. However, a contractor with many years of communications installation experience would have been aware of the above ceiling plenum space. This is a common method for returning conditioned air in buildings of this type.
>
> The Government has a contract with David Boland, Incorporated, and is not responsible for coordinating the work between subcontractors.
>
> In summary, the Government position is that the contract documents were adequately prepared, and the plenum space was readily discernible for a prudent contractor familiar with installations using this type cable system.

(AR4, tab J, 16 July 1997 ltr. at 3, 5)

34. On 6 October 1997, the contracting officer issued a final decision denying the claim in its entirety (R4, tab 2). Appellant timely appealed by letter of 18 December 1997.

DECISION

The issues in these appeals are the number of modular furniture outlets the contract provisions required appellant to install and whether appellant was required to install plenum-rated cable in the space above the ceilings. Our determination turns upon the issue of contract interpretation. We begin with the familiar rule that the intent of the parties "must be gathered from the whole instrument" and "an interpretation which gives a reasonable meaning to all parts of an instrument will be preferred to one which leaves a portion of it useless, inexplicable, inoperative, void, insignificant, meaningless, or superfluous; nor should any provision be construed as being in conflict with another unless no other reasonable interpretation is possible." *Hol-Gar Manufacturing Corp. v. United States*, 169 Ct. Cl. 384, 395, 351 F.2d 972, 979 (1965).

ASBCA No. 51259 -- Voice/Data Outlets

I. Contract Drawing Provisions; Parties' Asserted Interpretations

Drawings V01 through V06, titled "Communications Outlet Locations," require "modular furniture outlets" for voice and data, wired through Tapmate access boxes to channels embedded in the concrete floor. At every workstation location, there is a solid black triangle, obviously representing an outlet, connected by a black line (following the contours of the partitions) to what is undisputedly the symbol for a Tapmate box. In some cases only one solid black triangle is shown connected to a particular Tapmate box; in other cases, many are shown.

This dispute over the required number of modular furniture outlets arose because the Symbol Legend on Drawing V01 is arguably erroneous in two ways: *first*, in defining a solid black triangle connected to a Tapmate box symbol as a "MODULAR FURNITURE OUTLET" instead of as a modular furniture outlet connected to a Tapmate box; and *second*, in not including a solid black triangle alone, without a Tapmate symbol, as the symbol for a modular furniture outlet, like the four solid black triangles (with different letters next to them) which identified four different types of wall outlets.

Appellant argues that the combined symbol on Drawing V01 of a solid black triangle connected to a Tapmate box symbol, identified as the symbol for a modular furniture outlet, indicates that only one outlet is required wherever this symbol appears, irrespective of how many solid black triangles are shown on the drawings connected to a particular Tapmate box symbol (app. br. at 16-20), especially because the specifications and drawings nowhere expressly state in words that more than one outlet may feed through a single Tapmate box.

The Government contends that the Tapmate symbol remains the symbol for the Tapmate floor access box, and each black triangle connected to the Tapmate box symbol represents a separate modular furniture outlet (Gov't br. at 4-7, 11, 13-15).

II. Obviousness of Intended Meaning

Even assuming the Symbol Legend contained errors, we believe that the errors and the intended meaning were obvious. Just looking at the Symbol Legend alone, given the parties' understanding from other drawings of what a Tapmate box symbol was, it is evident that whoever created the drawing intended to represent a modular furniture outlet as a solid black triangle (without a letter next to it), just as the four other types of outlets were represented by solid black triangles (with letters next to them), and showed the modular furniture outlet symbol connected to a Tapmate box symbol in an attempt to be helpful by showing that the modular furniture outlets were all fed through Tapmate boxes.

The intended meaning of the Symbol Legend was all the more obvious from the illustrations on the drawings and the manifest purpose of the facility. Every workstation location, represented by a diagram of a chair and workstation table, has a solid black triangle. Yet appellant asserts that only one modular furniture outlet was to be fed from each Tapmate box; that the rest of the solid black triangles not shown connected to their own Tapmate boxes showed possible future locations for outlets as the Army's requirements might change; and that the contract therefore clearly only requires one outlet for each Tapmate box symbol or at least is ambiguous (Skubel affid., AR4, tab X at 5; app. br. at 22; app. reply br. at 7).

This interpretation defies common sense. As the Government correctly argues, this interpretation would leave many workstations, clearly shown on the drawings, without power and communications outlets – a manifestly unreasonable result. Moreover, appellant points to nothing in the specifications or drawings, such as a dotted line or a note, that suggests that some solid black triangles are real outlets and others are merely potential outlets and which are which.

If the Symbol Legend is erroneous, it is obviously so. The Symbol Legend is not ambiguous. A contract is ambiguous when susceptible of more than one reasonable interpretation, *Carothers Construction Co*., ASBCA No. 46945, 95-2 BCA ¶ 27,716 at 138,121. In this case there is only one reasonable interpretation; appellant's interpretation is unreasonable.

If appellant were correct that the modular furniture outlet symbol as shown in the Symbol Legend, in its entirety (that is, including the Tapmate box symbol), only identifies outlets, then by that same interpretation, few Tapmate boxes are shown on the drawings, because most of the Tapmate box symbols on the drawings are connected to solid black triangles. But appellant recognizes that each Tapmate box symbol requires a Tapmate box at

that location, which means that the Tapmate box symbol portion of the disputed symbol identifies a Tapmate box and the solid black triangle portion alone of the disputed symbol identifies an outlet. Thus, appellant's argument is logically inconsistent. Alternatively, if appellant simply believes that the disputed symbol means each outlet has to have its own Tapmate box, then the only reasonable conclusion appellant could have drawn was that the drawings erroneously omit numerous necessary Tapmate boxes, and appellant therefore should have included in its bid the cost of enough additional Tapmate boxes to provide one for every solid black triangle shown, that is, one for every workstation, or at least have inquired before bidding as to the Government's intention.

III. Reliance on Asserted Interpretation Not Shown

We finally observe that even if appellant could convince us that the defects in the drawings were latent and not readily apparent to bidders (which is the most it could hope to do given the clear intent of the drawings), it could not recover without proving the basis of its bid. JCNIS, the second-tier subcontractor and real party in interest here, may well have omitted the claimed outlets from its bid to the first-tier subcontractor. However, in order to recover, appellant, the prime contractor, would have to show both that it (the appellant) omitted the cost of the claimed outlets from its bid and that it did so because it actually adopted the interpretation of the disputed symbol now asserted or when pricing its own bid to the Government used the quote or bid of a subcontractor who did so, and not simply because of a mistaken failure to count black triangles as well as Tapmate box symbols.

The Federal Circuit held in *Fruin-Colnon Corp. v. United States*, 912 F.2d 1426, 1430 (Fed. Cir. 1990):

> The general rule is that "where a contractor seeks recovery based on his interpretation of an ambiguous contract, he must show that he relied on this interpretation in submitting his bid." *Lear Siegler Management Servs. Corp. v. United States*, 867 F.2d 600, 603 (Fed. Cir. 1989); . . . [citations omitted]. This rule of law is well settled. . . . [Citations omitted.] The burden of proving reliance on the claimed interpretation thus falls on the contractor.

The court went on to say that a subcontractor's reliance on a particular interpretation at the time of bidding can be imputed to the prime contractor where the prime relied on the subcontractor's bid in pricing its own bid to the Government. Id. at 1430. In the present case, however, appellant has not shown either that it relied on its asserted interpretation of the drawings at the time of bid or that when pricing its own bid to the Government it relied on the bid of a subcontractor who relied on the asserted interpretation when bidding to the prime (FF 5(e)).

ASBCA No. 51359 – Plenum-Rated Cable

Appellant's second claim arises from a dispute between the parties over whether appellant was required by the contract to install plenum-rated cable in the above-ceiling space.

I. Contract Requirement for Plenum-Rated Cable

It is undisputed (i) that the contract, specifically NFPA 70 incorporated by reference in the specifications, contained a general requirement to use plenum-rated cable in all "ducts, plenums and other space used for environmental air" (FF 17(a)-(b)); (ii) that the contract did not contain a specific requirement for plenum-rated cable on this project (FF 17(d), 19(e), 20), and (iii) that everyone concerned understood what a plenum is and the requirement of NFPA 70 (FF 17(c)). What is disputed is whether the contract properly identified the above-ceiling space as a plenum and whether appellant was required to run cable through that space.

II. Contract Requirement for Cabling Through Plenum

The voice/data communications drawings required cable to be run through the above-ceiling space (FF 19(d)). We therefore reject the Government's argument that the specification provision for appellant to submit a "Universal Wiring Plan" (FF 25) gave appellant complete design responsibility for routing of the cable even to the extent that it was appellant's free choice and not a contract requirement to run cable through the above-ceiling space.

III. Appellant's Responsibility for Knowing All Contract Requirements

The voice/data communications drawings contained no indication that the above-ceiling space was a plenum and did not cross-reference the HVAC drawings for such information (FF 19(e)). The HVAC drawings, however, made it clear that most if not all of the above-ceiling space was a plenum, both by express use of the term "plenum" in certain locations on the drawings and by identification of many ceiling grilles as return air grilles where there was no attached ductwork so as to make the above-ceiling space a return air plenum. This was so plain under the facts of this case that appellant, as prime contractor and general contractor for construction of the entire building, had to know it or should have known it. (FF 23) The indications of wall return air grilles feeding into return air ductwork account for the two references in the General Notes to return air ductwork; neither is inconsistent with a plenum and neither implies that all return air was to be handled by ductwork rather than a plenum.

It has been well established law over many years that the prime contractor, as the general contractor, has the responsibility to coordinate all trades and assure that each trade

is aware of relevant information normally appearing on drawings applicable to other trades. *E.g., R.A. Burch Construction Co*., ASBCA No. 39017, 90-1 BCA ¶ 22,599. In that case, a requirement for electrical wiring for exhaust fans, which the contractor argued should have been shown on the electrical drawings, was not, but instead was shown on the mechanical drawings along with the requirement for the fans themselves. The contractor argued that putting the electrical wiring requirements only on the mechanical drawings was insufficient notice to appellant's subcontractors in preparing their bids. The Board held:

> The drawings and specifications could undoubtedly have been prepared in a different fashion; and, undoubtedly could have been more completely cross-referenced. The appellant could just as easily have been more careful in its distribution of effort among its subcontractors. But, the evidence is clear that a bidder, reading the contract as a whole, would easily have recognized that the bathroom exhaust fans were required, and that the fans were to be wired for electricity and controlled at the bathroom light switch.
>
> The appellant would, in situations where the contract read as a whole is clear, transfer to the drafter the responsibility or authority to determine how work should be divided among a potential contractor's potential subcontractors.
>
> The appellant's position is without merit. There is no evidence to support the proposition for which it argued. Even if there were, the law is well settled to the contrary. . . . [Authorities omitted.]
>
> Unless the contract expressly provides otherwise, it is the prime contractor's freedom and responsibility to divide the work and obtain bids from whichever subcontractors it desires. If it is the custom for trade specialties to prepare bids based on a limited review of the contract drawings and specifications, it is a custom of which prime contractors are most assuredly aware. Prime contractors are responsible for obtaining whatever bids are desired. . . . [Authorities omitted.]
>
> As between the appellant prime contractor and the Government, the appellant was responsible for determining the scope of the work required and the amount of its bid. The contract read as a whole unambiguously required the installation and wiring of the exhaust fans. Any failure to consider the costs of wiring the bathroom exhaust fans was not

> the responsibility of the Government. It was the responsibility of the appellant prime contractor.

Id. at 113,395-96.

For these reasons, we conclude that the contract, read as a whole as appellant was responsible to do, clearly and unambiguously required plenum-rated cable to be used on this project for all cabling running through the plenum.

IV. Appellant's Trade Usage Argument

Appellant tries to negate its normal responsibility for coordinating all drawings and trades in this case, in particular the requirement for plenum-rated cable, or at least to convince us that the contract was ambiguous, by applying trade usage and custom. According to appellant's affidavit: "[I]t is the custom in the telecommunication network integration industry for a contract drawing to specifically identify each area that will require the use of plenum cable for voice and data communications. The requirement for plenum cable generally is written or annotated directly upon the drawing that indicates where such cable will be located. . . . Conversely, it also is an industry custom that plenum cable will not be used for voice and data communications unless contract drawings and/or specifications expressly require the use of plenum cable." (FF 24)[2]

Assuming without deciding that trade usage in the telecommunication network integration industry applied to the present contract,[3] trade usage cannot negate a clear and unambiguous requirement of the contract, namely, the requirement to use plenum-rated cable in the clearly identified plenum, as appellant seeks to do here. *See Jowett, Inc. v. United States*, 234 F.3d 1365 (Fed. Cir. 2000), a case remarkably similar to this one, where the contractor sought to negate a clear contractual requirement for insulation of cold-air supply ducts in plenums by invoking an asserted trade practice of not insulating supply ducts in ceilings. The contractor cited the Federal Circuit's decision in *Metric Constructors, Inc. v. NASA*, 169 F.3d 747 (Fed. Cir. 1999), concerning omission of the term "relamping," for the proposition that "when the language of the contract does not reflect industry practice, the contract is ambiguous and consequently the evidence of industry practice is admissible to aid in the interpretation of the contract." 234 F.3d at 1368.

The court in *Jowett* distinguished *Metric* as applicable when "a term with an accepted industry meaning . . . was omitted from the contract," and observed that trade practice may also be used where there is a "term in the contract that has an accepted industry meaning different from its ordinary meaning," citing *Gholson, Byars & Holmes Construction Co. v. United States*, 173 Ct. Cl. 374, 395, 351 F.2d 987, 999 (1965). 234 F.3d at 1369. The court squarely held, however, that "affidavits describing a supposed

common industry practice of not insulating air supply ducts in ceilings are simply irrelevant where the language of the contract is unambiguous on its face. It is well established that the government can vary from the norm in the trade when contracting for goods and services." *Id.* The court emphasized that "affidavits that those familiar with trade practices in the construction industry would interpret the specifications differently are irrelevant, unless they identify a specific term that has a well-understood meaning in the industry and that was used in, or omitted from, the contract." *Id.* at 1369-70.[4]

The *Jowett* decision is directly applicable to the present case, and precludes appellant from using a trade practice to negate a clear contract requirement, because in this case appellant does not "identify a specific term that has a well-understood meaning in the industry and that was used in, or omitted from, the contract."

We therefore conclude that under the facts as proven in the present case, appellant remained responsible as the general prime contractor to assure that its first-tier subcontractor responsible for cabling was aware of the plenum shown on the mechanical drawings.

Undoubtedly it would have been helpful to appellant and its subcontractors if the Government had highlighted on the voice/data communications drawings the need for plenum-rated cable, but, on the factual record before us, we find that the Government was not required to do so. Absent any persuasive evidence or precedents to the contrary, we must conclude that this is a classic case of the prime contractor's (and possibly also the first-tier subcontractor's[5]) failure to fulfill its responsibility to coordinate the various trades and in particular in this case give the subcontractor(s) the necessary information from the HVAC drawings regarding the need for plenum-rated cable.

V. Reliance on Asserted Interpretation Not Shown

Finally, we note that, just as with respect to the voice/data outlets claim, even if appellant could convince us that the need for plenum-rated cable for work on the communications drawings was somewhat ambiguous because apparent only on the mechanical drawings (which is the most it could hope to do given the clear existence of a plenum on the mechanical drawings), it could not recover without proving the basis of its bid. *See Fruin-Colnon Corp. v. United States*, 912 F.2d 1426, 1430 (Fed. Cir. 1990); *Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 752 (Fed. Cir. 1999) (holding that a party asserting trade practice to overcome clear language of a contract must make "a showing that it relied reasonably on a competing interpretation of the words when it entered into the contract"), quoted with approval in *Jowett, Inc. v. United States*, 234 F.3d 1365, 1368 (Fed. Cir. 2000); *Western States Construction Co. v. United States*, 26 Cl. Ct. 818, 824

(Cl. Ct. 1992). Appellant, the prime contractor, has not shown reliance on the asserted trade practice and interpretation at the time of bidding, that is, that it omitted the claimed extra costs from its bid and that it did so because it actually adopted the interpretation now asserted in reliance on trade practice or because, when pricing its own bid to the Government, it used the quote or bid of a subcontractor who did so (FF 5(e)).

CONCLUSION

For the foregoing reasons, these appeals are denied.

Dated: 8 May 2001

JOHN LANE
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

MARK N. STEMPLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I concur

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

NOTES

[1] Board letter to parties 20 August 1998. Appellant has asked the Board to decide quantum as well (app. reply br. at 1 n.1). Because of our ruling herein, the request is moot.

[2] We note two potential deficiencies in appellant's proof of trade usage (though we need not address them further in light of our disposition of this appeal on other grounds). *First*, appellant's evidence does not rule out the possibility that the

general but nonetheless express requirement of the specifications to use plenum-rated cable in plenums (FF 17(b)) was sufficient under trade usage to transfer to appellant the asserted responsibility of the owner to "specifically identify each area that will require the use of plenum cable." *Second*, appellant's evidence does not address whether an experienced telecommunication network integration contractor has a corresponding obligation, even absent such identification, to be aware of the possible existence of a plenum and to verify whether there is one – an obligation plausibly asserted by the Chief of the Construction Division of the Mobile District of the Corps of Engineers (FF 33).

[3] "Unless otherwise agreed, a usage of trade in the vocation or trade in which the parties are engaged or a usage of trade of which they know or have reason to know gives meaning to or supplements or qualifies their agreement." RESTATEMENT OF CONTRACTS (SECOND), § 222(3) (1981). *See* U.C.C. § 1-205 (1989). "The more general and well-established a usage is, the stronger is the inference that a party knew or had reason to know of it." RESTATEMENT, § 221, cmt. b. See 12 SAMUEL WILLISTON, WILLISTON ON CONTRACTS §§ 34:14 -:16 (4th ed. 1999), for an excellent discussion of the law on usage and custom, including trade usage. *See Kenneth Reed Construction Corp. v. United States*, 201 Ct. Cl. 282, 288, 475 F.2d 583, 586-87 (and authorities cited) (1973); *PSG Co. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 417 F.2d 659, 662 n.7 (9th Cir. 1969), *cert. denied*, 397 U.S. 918 (1970); *Gholson, Byars & Holmes Construction Co. v. United States*, 173 Ct. Cl. 374, 396, 351 F.2d 987, 1000 (1965) (and authorities cited); *Carothers Construction Co*., ASBCA No. 46945, 95-2 BCA ¶ 27,716, at 138,122; *Riley Stoker Corp*., ASBCA No. 37019, 92-3 BCA ¶ 25,143, at 125,328-29. We observe that appellant has not shown or alleged that either test for applicability of trade usage -- engagement in the trade or actual or constructive knowledge of the usage -- was met in this case with respect to the relatively new telecommunication network integration industry.

[4] Quoted with approval in *Buchanan v. DOE*, ___ F.3d ___ , No. 01-3018, 2001 U.S. App. LEXIS 6021, 2001 WL 339514, Slip Op. at 6 (Fed. Cir., 9 Apr. 2001). In refusing to allow trade usage to *negate* a clear contract requirement, the court in *Jowett* does not appear to have been expressing a view on when trade usage may operate to *include omitted* details in the contract. "[E]ven where details of work have been omitted from a contract drawing, those details are nevertheless to be taken as an understood part of the contractor's obligation if trade custom or practice confirms this to be so." *Alfred A. Altimont, Inc. v. United States*, 217 Ct. Cl. 628, 633, 579 F.2d 622, 625 (1978) (and authority cited).

[5] It is not clear on this record whether appellant's first-tier subcontract with Henderson Electric, Heat and Air Conditioning, Inc. included the mechanical work as well as the electrical work so that Henderson arguably had an obligation to coordinate requirements on the mechanical and cabling drawings, in addition to or instead of appellant's obligation as prime contractor.

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA Nos. 51259, 51359, Appeals of David Boland, Inc., rendered in conformance with the Board's Charter.

Dated:

EDWARD S. ADAMKEWICZ
Recorder, Armed Services
Board of Contract Appeals