

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of -- )  
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States Roofing Corporation ) ASBCA No. 54854  
 )  
Under Contract No. N62470-97-C-8319 )

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OPINION BY ADMINISTRATIVE JUDGE PARK-CONROY

Appellant has filed 11 appeals seeking a total of \$1,449,785 arising out of a contract for repair and related work to roof cells on Building W-143 at the Naval Operating Base (NOB), Norfolk, VA. Eight of the appeals involve both entitlement and quantum: ASBCA No. 54854 – Parapet Walls; ASBCA No. 54860 – Defective Submittal Register; ASBCA No. 55500 – Safety Assurance; ASBCA No. 55501 – Acceleration; ASBCA No. 55502 – General Conditions/Delay; ASBCA No. 55503 – Lobby Skylight Replacement; ASBCA No. 55504 – Proposal Preparation Costs; and ASBCA No. 55505 – Disruption. The remaining three appeals involve only quantum: ASBCA No. 55506 - Crane; ASBCA No. 55507 – Credit for Deleting Wood Blocking; and ASBCA No. 55508 – Cancellation of Roof Cells D & F.

We issue this decision on the claim in ASBCA No. 54854 separately because it involves discrete questions of contract interpretation regarding work to be performed on the parapet walls.

GENERAL FINDINGS OF FACT  
APPLICABLE TO ALL ELEVEN APPEALS

*Bid and Award*

The Navy awarded Contract No. N62470-97-C-8319 in the amount of \$2,370,000 to appellant States Roofing Corporation (SRC) on 7 August 2000 for repair and related work on the roof cells at Building W-143, NOB, Norfolk, VA (R4, tab 1 at 2). Building W-143 has 11 roof cells, designated as Roof Cells A through K. The contract also specified work on the penthouses located on the roof cells, including the penthouses on Roof Cells A and B, although roofing work itself was not specified for Roof Cells A and B because it had previously been performed. (Ex. A-4)

Section 01110, SUMMARY OF WORK, stated in paragraph 1.1.1, "Project Description," that the work included the "removal of existing single ply roofing, membrane roofing, asphaltic concrete paving, 5-ply waterproofing, roof insulation, ballast, flashing and steel stairs, concrete and masonry repairs to walls" and the installation of "new 4-ply built-up roofing over tapered insulation, new flashing, new steel ladders, painting and incidental related work." The initial performance period was 360 days, establishing a completion date of 17 August 2001. (R4, tab 1 at 2, 90)

Building W-143 was occupied by the Fleet and Industrial Supply Center (FISC). Contract section 01140, WORK RESTRICTIONS, advised in paragraph 1.10, "OCCUPANCY REQUIREMENTS," that Building W-143 would remain open during the entire construction period, thus requiring special scheduling attention (R4, tab 1 at 92-94). The contract was administered by the Resident Officer in Charge of Construction (ROICC) Sewells Point, Naval Facilities Engineering Command (NAVFAC), Atlantic Division, Norfolk Naval Station, Norfolk, VA on behalf of FISC. NAVFAC was paid a fee of eight percent. (R4, tab 1 at 2; tr. 6(2)<sup>1</sup>/131)

SRC's trade specialty is roofing. It has experience with all types of roofing and roofing work, including new installations and roof replacements and repairs, and has completed approximately 900 roofing projects for the government. (Tr. 1/21-22) Prior to submitting SRC's bid, Mr. Hugh DeLauney, SRC's president, visited Building W-143 and walked the entire roof to familiarize himself with the required work (tr. 1/27-28).

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<sup>1</sup> The hearing of these appeals lasted three weeks. The transcripts for the first week are numbered 1 through 5. The transcripts for the second and the third weeks are both numbered 6 through 10, instead of 6 through 10 and 11 through 15. Appellant and the government designated the transcripts for the third week as 6(2) through 10(2) to differentiate them from the transcripts for the second week. We adopt the same designations.

SRC was the low bidder at \$2,370,000. The government's estimate of \$2,409,000 was prepared by Mr. David Greenfield, a registered architect employed by the Naval Public Works Center, who reviewed the drawings and used the RS Means estimating publication. (Supp. R4, tab 201; tr. 7/14, 18, 53)

The contract incorporated the following standard FAR clauses: 52.233-1, DISPUTES (DEC 1998); 52.236-2, DIFFERING SITE CONDITIONS (APR 1984); 52.236-3, SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984); 52.236-6, SUPERINTENDENCE BY THE CONTRACTOR (APR 1984); 52.236-7, PERMITS AND RESPONSIBILITIES (NOV 1991); 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984); 52.236-12, CLEANING UP (APR 1984); 52.236-13, ACCIDENT PREVENTION (NOV 1991); and 52.243-4, CHANGES (AUG 1987) (R4, tab 1 at 60).

The preconstruction conference was held on 12 September 2000. Among the topics discussed were the Navy's changes precluding use of the Building W-143 freight elevator to move equipment and personnel and selecting a new location for SRC's lay-down area. (R4, tab 4) The freight elevator was very large and SRC's bid price reflected its plan to use the elevator during performance as had been indicated by the contract documents (tr. 1/34-35, 7/71). The lay-down field storage staging area was changed from the east end of Building W-143 to two new areas on the north side of the building (R4, tab 3 at 656, tab 4 at 704).

Re-sequencing the order of the roof work was also discussed (R4, tab 4). As specified in section 01140, paragraph 1.5, "SPECIAL SCHEDULING FOR OCCUPIED BUILDINGS," SRC was to begin work on Roof Cell I and complete the north side of the building before starting work on the south side. Additionally, Roof Cell K was to be completed before Roof Cells C and D. (R4, tab 1 at 92) SRC was asked instead to begin work on Roof Cell K, continue to the north side of the building and then complete work on the south side. SRC agreed to the change and incorporated the change into its approved baseline schedule. (R4, tab 4 at 708; ex. G-2, tab 9C)

SRC mobilized on 17 October 2000, beginning with staging and setting up its trailer (supp. R4, tab 380, Rpt. No. 1-55). SRC did not perform any major contract work until early November when it began construction of the trash chute and ramps and performed demolition work on Roof Cell K (supp. R4, tab 380, Rpt. Nos. 1-57 through 1-98). SRC's Demolition Plan was approved on 31 October 2000, however, the Preparatory Meeting for this phase of the work was not held until 29 November 2000 (R4, tab 1, § 01450, ¶ 1.10.1 at 142-43; supp. R4, tabs 318, 509). Demolition of Roof Cell I followed Roof Cell K (R4, tab 380, Rpt. No. 104).

Beneficial occupancy occurred on 6 November 2001 (R4, tab 11).

### *SRC's Claims*

The parties met several times to negotiate SRC's cost proposals for outstanding work items and settled a number of them (supp. R4, tabs 518, 519, 522A, 523; tr. 3/108-10, 6(2)/232-34). On 25 February 2002, SRC submitted a Request for Equitable Adjustment (REA) that included cost proposals for the Defective Submittal Register (ASBCA No. 54860), Safety Assurance (ASBCA No. 55500), Acceleration (ASBCA No. 55501), Delay (ASBCA No. 55502), Disruption (ASBCA No. 55505), and Pricing and Scoping (ASBCA No. 55504) (R4, tab 130).

On 18 April 2003, SRC requested a contracting officer's final decision on 67 specified outstanding items for which cost adjustments had been requested and converted these items into formal certified claims (R4, tab 147). We deem the claim to have been received on 21 April 2003. Prior to SRC's submission of these claims, the Navy had forwarded to SRC a proposed Modification No. P00007, to be issued bilaterally with a full release, to definitize other pending matters. SRC did not sign Modification No. P00007 and it was issued unilaterally on 23 April 2003. (R4, tabs 2, 133; tr. 6(2)/136)

Modification No. P00007 definitized the cost of contract work authorized by Modification Nos. P00001 through P00004, increasing the contract price by a total of \$187,260, and extended the performance completion date by 45 days (R4, tab 2). Modification No. P00007 included an additional \$54,524 for demolishing asphalt thicknesses on the roof cells in excess of the "3 ±" indicated on Sheet A2, Demolition Note 2, of the drawings, bringing the total adjustment for this work to \$129,524 (\$75,000 having been paid by unilateral Modification No. P00004, dated 2 August 2001) and \$78,151 for leveling the roof (work authorized by unilateral Modification No. P00002, dated 17 July 2001). (R4, tabs 2, 3)

An audit by the Defense Contracting Audit Agency (DCAA) was requested by the contracting officer as part of her review of SRC's claims. SRC provided the DCAA auditor, Ms. Cecelia R. Ambrose, with additional requested information and on 25 August 2004, it revised the documentation for three of the claim items now at issue: the parapet walls (ASBCA No. 54854); the crane (ASBCA No. 55506); and the cancellation of Roof Cells D & F (ASBCA No. 55508). (R4, tab 142; app. supp. R4, tab 158) On 1 September 2004, the contracting officer issued a final decision that addressed all of the claims asserted and found entitlement to an additional \$53,400 beyond that awarded in Modification No. P00007 (R4, tab 143). In an attempt to avoid confusion, on 30 September 2004, she issued another final decision specifically addressing what she referred to as the three supplemental claims (the parapet walls, the crane and the cancellation of Roof Cells D & F) finding no additional entitlement (R4, tab 146). Unilateral Modification No. P00008 was issued on 22 October 2004 incorporating the

additional amounts found due in the contracting officer's 1 September 2004 decision (R4, tabs 2; supp. R4, tab 533).

A timely notice of appeal was filed at the Board on 24 November 2004. A number of the remaining claims were settled before the trial, leaving the eight claims for decision on both entitlement and quantum and three claims for decision on quantum identified above. The Board directed appellant to prepare a Statement of Costs (SOC) to which it claimed entitlement and the Navy to prepare its Response to appellant's Statement of Costs (RSOC).

Ms. Susan Moser, who is SRC's accountant, performed a review and audit of SRC's outstanding claims. She was qualified as an expert in government cost accounting and prepared a report that was received in evidence as appellant's trial exhibit 2 (ex. A-2). She concluded that SRC incurred costs of \$3,329,317.51 on this contract, excluding profit. (Ex. A-2, tab 1 at 8 of 47; tr. 8(2)/86-99) SRC stipulated that Ms. Ambrose was an expert in the field of auditing government contractors, including analyzing claims and pricing proposals (tr. 10(2)/43-45). She concluded that SRC incurred costs of \$3,336,636, excluding profit (RSOC, ex. 3, tab 13 at E-4). Her DCAA audit report is found at tab 12 of the Navy's Amended Response (ARSOC) to SRC's Amended Statement of Costs (ASOC). Including settled claim items, SRC had been paid a total of \$2,934,346.07 as of 12 September 2006 (ex. G-28; tr. 10(2)/50). Irrespective of whether we use either the computation of costs incurred prepared by Ms. Moser or Ms. Ambrose, we are satisfied that SRC is in a loss position.

With respect to the quantum issues, the parties stipulated that the following indirect rates should be applied as appropriate: labor burden rate of 20.14%; field overhead rate of 57.43%; home office overhead/G&A rate of 13.57%; facilities capital cost of money (FCCOM) rate of 0.0166%; and bond rate of 0.045%. (App. br. at 24-25; gov't br. at 19)

#### *Foreman Hourly Rate*

The parties stipulated that a rate of 7% of direct labor man hours should be used to compute the number of supervisor/foreman hours charged (tr. 8(2)/150). However, they disagreed about the hourly rate to be applied. Ms. Ambrose developed a rate of \$14 per hour because SRC had used that rate on some of its claims, although it had used a variety of different rates, most of which she was unable to verify (ARSOC, ex. 12 at 38; tr. 10(2)/61-62). She thought it was important to be consistent and used the rate throughout the audit (tr. 10(2)/63). Ms. Moser initially adopted \$14.00 as the supervisor/foreman rate, but subsequently changed it to an average rate of \$16.62 based upon her review of SRC's job cost records and its identification of individuals in that category (ex. A-2 at 27 of 47, tab A at 06080; tr. 8(2)/142-43, 10(2)/188-89). She used

the \$16.62 average rate for all of SRC's claim items (tr. 8(2)/149). We find the \$16.62 hourly rate for the supervisor/foreman to be the more reliable rate and adopt it for our quantum calculations.

### *Roofer Hourly Rate*

During the hearing, SRC stipulated to the \$11.15 hourly rate used by the Navy for roofers (tr. 10(2)/61).

### *Profit*

SRC bid profit of \$297,700 on its estimated costs of \$2,072,300. Using simple division, the rate of profit bid was 14.37%. (Ex. A-2 at 18 of 47; tr. 8(2)/117-18; 10(2)/147) As revised by Ms. Moser, the remaining claims seek 14.37% profit (ex. A-2). We find no evidence of a higher degree of difficulty or other risk factors associated with this roofing contract, or the changes to it, than typically would be anticipated.

The Navy calculated a 7% reasonable profit objective for negotiations with SRC using the weighted guidelines method set forth in the Department of Defense Federal Acquisition Regulation Supplement (DFARS) 215.404-71 (2000). This profit objective was approved by the contracting officer. (Supp. R4, tab 388, subtab 55 at 36; tr. 9(2)/161-63, 165-66) It is NAVFAC's policy to use its own pre-printed DD Form 1547, Record of Weighted Guidelines Application (tr. 9(2)/180). The Navy incorporated 7% profit into its standard DD Form 1547 and SRC used 7% profit in preparing all of its cost proposals (tr. 8(2)/210, 261). SRC continued to seek 7% profit when it certified its cost proposal as CDA claims (R4, tabs 142, 147). It was used for bilateral Modification No. P00006, issued on 19 December 2001, definitizing the cost of spalled concrete repairs on the exterior band of the parapet directed by Modification No. P00005 (R4, tab 2).

Ms. Ambrose reviewed SRC's financial statements and tax returns and determined that a 7% profit was within SRC's company-wide average (ARSOC, ex. 12 at 19-20; tr. 10(2)/136, 146). Mr. Mark J. Airaghi, the ROICC Supervisory Engineer, has never seen a profit rate of 14% used for construction contracts performed at the NOB, Norfolk. In his experience, the profit rate for construction contracts is between 7 and 9 percent. (Tr. 9(2)/186) G&A was excluded from the profit calculation in SRC's initial claim and all of its cost proposals (tr. 8(2)/227). It is included in the final, revised claims presently before the Board (ex. A-2).

ASBCA No. 54854  
PARAPET WALLS

*Additional Findings of Fact*

The following contract specifications and drawings are of relevance to the contract interpretation questions presented in ASBCA No. 54854 relating to Roof Cells A through J. Both the contract solicitation and the contract drawings describe the scope of work as: “Building W-143 Roof Replacement, Wall Repair & Painting” (R4, tab 1 at 1; ex. G-4). *See also* Section 01110, SUMMARY OF WORK, paragraph 1.1.1 quoted in the general findings of fact.

Section 09900, PAINTS AND COATINGS, stated in paragraph 1.9.3, “Exterior Painting:”

Includes new surfaces, existing coated surfaces, existing uncoated surfaces, of the building and appurtenances as indicated. Also included are existing coated surfaces made bare by cleaning operations.

(R4, tab 1 at 320, 325) Paragraph 3.3.3, “Removal of Existing Coatings,” directed the removal of existing coatings from painted masonry brick, block and concrete and paragraph 3.5, PREPARATION OF CONCRETE AND CEMENTITIOUS SURFACE, provided the specifications for the surface cleaning of the concrete and cementitious surfaces (R4, tab 1 at 327, 328). Paragraph 3.7.4, “Coating Systems,” included Table 3 which was applicable to “Exterior Concrete, Concrete Masonry, and Brick” and specified three coats of paint (primer, intermediate, and topcoat) sufficient to provide “no less than 20 mils of finished coating system.” (R4, tab 1 at 331, 334)

The specification for the roof base flashing/membrane is found at section 07511, BUILT-UP ASPHALT ROOFING (AGGREGATE SURFACED), paragraph 3.5.1(a), “Three-Ply Bituminous Build-Up Base Flashing” (R4, tab 1 at 280, 288). There is no specification for the parapet wall waterproofing membrane, which was inadvertently omitted (R4, tab 36; supp. R4, tab 357; tr. 7/52-54).

There are 48 sheets of contract drawings (ex. G-4). Sheet A2 contains “DEMOLITION NOTES” and “NEW WORK NOTES (SHEET A8 THRU A36).” Sheets A8 through A27 relate to the penthouses and Sheets A28 through A36 are photographs. Demolition Note 23 on Sheet A2 provides:

EXISTING CONCRETE PARAPET WALL TO REMAIN. REMOVE  
EXISTING FLASHING, AND GRANULE SURFACED SPRAYED ON

MEMBRANE TOP COAT, GRANULE SURFACING AND FLASHING  
FROM INSIDE FACE AND TOP OF PARAPET WALL DOWN TO  
BARE CONCRETE SURFACE. REPAIR WALL AS REQUIRED.  
(TYPICAL FOR ALL PARAPETS).

New Work Note 27 on Sheet A2 states: “PROVIDE SHEET METAL COPING, DETAIL 1/A38 SIMILAR.” New Work Notes 28 and 29 on Sheet A2 required that existing painted concrete and brick be prepped and repainted Color No. 1. New Work Note 61 provides: “BACK SIDE OF PARAPET WALL – PAINT DOWN TO SURFACE APPLIED COUNTER FLASHING, COLOR NO. 1.” (Ex. G-4 at 3 of 45) The “back side” of the parapet wall means its interior side (ex. A-13; tr. 2/170). “GENERAL WORK NOTES” 12 and 18 on Sheet A3 described work similar to New Work Notes 28 and 29. General Work Note 18 explicitly refers to the parapets. (Ex. G-4 at 3, 4 of 45)

Sheets A4 through A7 of the contract drawings depict roofing work on Roof Cells C through J, not penthouse work (ex. G-4 at 5-8 of 45). Sheet A4 is captioned “PARTIAL ROOF PLAN – AREAS ‘C’ & ‘D’.” Detail 1 on Sheet A4 is located at a roof drain site, is labeled “TYPICAL” and refers to Sheet A38. Detail 1 on Sheet A38 is captioned “TYPICAL FLASHING DETAIL @ ROOF DRAINS & PARAPET WALLS.” (Ex. G-4 at 3, 39 of 45) Sheet A38 contains several New Work Notes that are relevant: 2 is “WATERPROOFING MEMBRANE (3 LAYERS);” 3 is “TREATED WOOD NAILERS;” 4 is “SHEET METAL COPING;” 19 is “MULTIPLE-PLY MEMBRANE BASE FLASHING;” 20 is “FASTENERS AT 8 ½ O.C;” and 28 is “SAW CUT EXISTING CONCRETE TO CREATE NEW REGLET. ALIGN WITH ADJACENT REGLET IN BRICK.” Detail 1 on Sheet A38 shows multiple-ply membrane base flashing running along the roof and up the inside of the parapet wall to the top of the wood nailers where it terminates at the fasteners. Detail 1 then depicts three lines, reflecting three layers of waterproofing membrane, beginning above the terminated base flashing and continuing up the inside and over the top of the parapet wall where the use of sheet metal coping is indicated. Sheet A38 does not specify any required thickness for the waterproofing layers. (G-4 at 3, 39 of 45; tr. 7/26-27, 9/231, 10/61-63)

The Key Plan on Sheet A8 indicates the penthouses on Roof Cells A and B where work is to be performed (tr. 7(2)/238-41). General Note 2 refers back to the work notes contained on Sheets A2 and A3. Elevation 4, “EXTERIOR ELEVATION – W,” and Elevation 9, “EXTERIOR ELEVATION – N,” on Sheet A8 both combine Demolition Note 23 and New Work Note 61, designating the work as “TYP[ICAL]” for the interior side of the penthouse parapet walls. (Ex. G-4 at 9 of 45; tr. 2/174-75)

The Key Plan on Sheet A9 indicates that it provides the details for the work on the penthouse on Roof Cell C. General Note 2 on Sheet A9 again refers back to the work notes contained on Sheets A2 and A3. Detail 1 on the “ROOF PLAN – ELEV[ATOR]

P[ENT]H[OUSE] #3,” refers to Sheet A40. Detail 1, “TYPICAL SCUPPER DETAIL @ PENTHOUSES & BRIDGE ROOFS,” on Sheet 40 reflects several New Work Notes, in particular New Work Note 15, “WATERPROOF MEMBRANE (3 LAYERS),” which is depicted by three lines on the inside of the penthouse parapet wall that continue up the wall to a cut line. (Ex. G-4 at 10, 41 of 45)

The Key Plan on Sheet A14 indicates that it provides the details for the work on the penthouse on Roof Cell F, with General Note 2 again referring back to the work notes contained on Sheets A2 and A3. Elevation 1, “EXTERIOR ELEVATION – N,” identifies New Work Notes 28 and 29 (prepare and paint existing painted concrete and brick) as “TYP[ICAL].” (Ex. G-4 at 15 of 45)

Elevation 1, “EXTERIOR ELEVATION – N,” on Sheets A9 through A16, A19, and A21 and Elevation 4, EXTERIOR ELEVATION – N” on Sheet 17 identify New Work Note 27 from Sheet A2 as “TYP[ICAL].” Sheet A18 consists of photographs and interior drawings. Elevation 2, “EXTERIOR ELEVATION – S,” on Sheet A20 also identifies New Work Note 27 from Sheet A2 as “TYP[ICAL].” All of these references to New Work Note 27 (sheet metal coping with reference to Detail 1 on Sheet A38) relate to the penthouse parapet walls. (Ex. G-4 at 10-22 of 45)

Sheet A37 and two of its New Work Notes are also relevant. Detail 1 is captioned: “TYP[ICAL] BLDG. EXP[ANSION] JOINT DETAIL @ PENTHOUSE WALLS.” The expansion joint is part of the main roof. Detail 1 refers to New Work Note 25, “WATERPROOFING MEMBRANES (3-PLY).” Detail 3 is captioned: “TYPICAL FLASHING DETAIL @ PENTHOUSE SIDE WALLS.” Both Details 1 and 3 refer to New Work Note 5, “MULTIPLE-PLY MEMBRANE BASE FLASHING.” (Ex. G-4 at 38 of 45) The word “ply” is used to refer to roofing materials in the construction industry (ex. A-14; tr. 2/197-98, 7/53, 10/55).

New Work Notes 2 on Sheet A38 and 15 on Sheet A40 specify “WATERPROOFING [OR WATERPROOF] MEMBRANE (3 LAYERS)” (ex. G-4 at 39, 41 of 45; tr. 10/52). In contrast, New Work Note 25 on Sheet A37 specifies “WATERPROOFING MEMBRANES (3-PLY)” and New Work Notes 5 on Sheet A37 and 19 on Sheet A38 call for “MULTIPLE-PLY MEMBRANE BASE FLASHING” (ex. G-4 at 38, 39 of 45).

### *The Dispute*

A disagreement about whether the parapet walls were to be painted or covered with a three-ply waterproofing membrane flashing material surfaced in late 2000. At the time of bid, SRC intended to paint the parapet walls after cleaning them; it did not intend to apply any type of wall flashing to them (app. supp. R4, tab 152; tr. 2/185-86). This plan was similar to the work recently performed by RayCo Roofing (RayCo) when it had

replaced the roof systems on Roof Cells A and B, painted the parapet walls and counterflashed the bottom to a termination bar which was then caulked, thus providing waterproofing. Mr. DeLauney had observed the work on Roof Cells A and B during his site visit. (Exs. A-4, -13, G-8; tr. 2/13, 30-31) The use of paint to waterproof parapet walls is not uncommon in the industry (R4, tab 36; tr. 7/52-53). In fact, SRC previously had used paint to waterproof parapet walls on two other government contracts (tr. 2/199-200).

LT Darren R. Hale, USN, the Assistant Resident Officer in Charge of Construction (AROICC), however, interpreted Sheet A38 of the contract drawings as requiring waterproofing membrane to come up and over the top of the parapet walls and on 6 November 2000, LT Hale sent an e-mail to Mr. Greenfield seeking clarification of his interpretation (supp. R4, tab 230). SRC had selected a Johns Manville roofing system and had contacted Johns Manville about a product suited for the parapet walls. The Johns Manville representative suggested its DynaClad product, SRC passed the suggestion on to the Navy, and the Navy evaluated and agreed with it (R4, tab 23; tr. 2/201-03, 7/40-41, 81). In an e-mail dated 13 November 2000, Mr. Greenfield provided LT Hale with Johns Manville product information about DynaClad to be used as an alternative to “three plies of waterproofing and wood blocking” and a sketch dated 7 November 2000 showing the installation of DynaClad on the parapet walls. He noted that DynaClad and DynaWeld were shown for the base flashing. LT Hale forwarded Mr. Greenfield’s 13 November 2000 e-mail and attachment to SRC on 14 November 2000. (R4, tab 23) He also asked Mr. Greenfield for a cost estimate for such a change (supp. R4, tab 231). The record does not contain any evidence of whether Mr. Greenfield provided this estimate, however, LT Hale recalled discussing the change with him and others and coming to the conclusion that the cost was the same (tr. 8/143-45). There was evidence that, as designed, installation of the three-ply system with alternating layers of plastic cement would have been a time consuming and expensive flashing system.

On 12 December 2000, SRC submitted a proposal for an equitable adjustment for the additional costs associated with the installation of DynaClad, instead of painting (supp. R4, tab 356). On 20 December 2000, LT J.D. Millinor, USN, another AROICC who was covering for LT Hale in his absence, sent SRC a letter about the “apparent misunderstanding regarding the material that [was] required on the inside of the parapet walls.” He advised SRC that Detail 1 on Sheet A38 of the contract drawings called for a concrete primer covered by three layers of waterproofing membrane and that the membrane was “to be a material similar to DynaClad, not paint.” (Supp. R4, tab 248; tr. 7/200-01) Mr. DeLauney responded on 28 December 2000 that SRC read the contract documents as requiring it to paint the parapet walls, pointing specifically to Demolition Note 23 on Sheet A2, contract specifications from Section 09900, New Work Notes 28 and 61 on sheet A2, and General Work Notes 12 and 18 on sheet A3 (R4, tab 25).

The issue continued to be a subject of discussion during January (R4, tabs 27, 31). By a letter dated 2 February 2001, SRC acknowledged a “direction” from LT Hale on 31 January 2001 to install “aluminum clad flashing and base sheet on the parapet wall for Roof ‘I’” (DynaClad) per the sketch provided on 13 November 2000 (R4, tab 39).

Also on 2 February 2001, LT Hale responded to SRC’s 28 December 2000 letter, disagreeing with SRC’s interpretation of the contract documents, but conceding that the Navy “inadvertently did not include the specification section for the three-ply water proofing membrane.” He pointed to Detail 1, New Work Note 25 on Sheet A37, Detail 1, New Work Note 2 on Sheet A38, and Detail 1, New Work Note 15 on Sheet A40 and commented that the words “ply” and “layers” are not used to describe paint. (R4, tab 36)

LT Hale had asked Mr. Greenfield about the water proofing product the designer had in mind and Mr. Greenfield obtained that information for him (tr. 7/63-65, 202-03). LT Hale attached the GAF roofing product information Mr. Greenfield had provided to him to his 2 February 2001 letter as an example of the product indicated in the contract drawings. He also enclosed another copy of the DynaClad detail he had provided to SRC on 13 November 2000 and advised SRC that DynaClad was “the acceptable substitute for the specified waterproofing membrane,” but as a no cost deviation from the contract requirements “because the credit for the deletion of the three-ply waterproofing membrane and associated labor is approximately equivalent to [the] cost of the DynaClad and associated labor.” (R4, tab 36; tr. 7/200-03)

The evidence established that the GAF product was for use on walls with a maximum height of 24 inches; the parapet walls on Building W-143 were about twice that height (tr. 2/204-05, 7/46-47). SRC was concerned that it required hot mopping, which SRC considered to be improper and unsafe on vertical surfaces as high as the Building W-143 parapet walls. Additionally, the GAF product could not be warranted under the Johns Manville roof system SRC was installing. (R4, tab 40; tr. 2/205-06, 5/63-64, 7/59, 7(2)/235-37)

The minutes of the 6 February 2001 construction meeting reflect that Mr. DeLauney expressed concern and disagreement about the use of the GAF product, which he pointed out was not warranted by Johns Manville. The minutes state that Mr. DeLauney “suggest[ed] using Dynaclad [sic] over the Dynabase...and the Dynaclad [sic] over the entire wall” and then said that “the Dynaweld and Dynaclad [sic] is here and unless told different, SRC will install it on the wall,” and that “Lt. Hale said that he does want it installed.” (R4, tab 40) On 7 February 2001, LT Hale and Mr. Greenfield had a discussion with the Johns Manville representative who provided them with cut sheets for another Johns Manville product and explained an application that would make it acceptable on walls higher than 24 inches (supp. R4, tab 270; tr. 7/205-06). By a letter dated 9 February 2001, LT Hale sent the cut sheets for the Johns Manville product and

also for an Owens-Corning product, together with an explanation of how either could meet the requirements detailed in the contract drawings (R4, tab 45). The designer had used the Owens-Corning product, not the GAF product, as the basis for Detail 1 on Sheet 38. The Owens-Corning product did not have a height limitation. (Tr. 7/47, 65-66)

Meanwhile, as had been requested by LT Hale, SRC had obtained a letter from Johns Manville approving the installation of DynaClad on the parapet walls and out onto the roof a minimum of four inches for purposes of an extended roof warranty (R4, tab 47; tr. 2/207-08). In an e-mail dated 16 February 2001, Mr. Greenfield advised LT Hale that he agreed with the decision to use DynaClad flashing on the parapet walls and was satisfied with the Johns Manville installation guarantee (supp. R4, tab 272).

The minutes of the 20 February 2001 construction meeting reflect LT Hale's agreement that installation of DynaClad flashing had been authorized for Roof Cell I (R4, tab 50). The minutes of the 6 March 2001 meeting reflect discussion of the need to resolve the issue for Roof Cell G and the ongoing disagreement about whether the use of DynaClad was a no cost change based upon SRC's and the Navy's different interpretations of the contract requirements (R4, tab 54).

ENS Alex Palmer replaced LT Hale as the AROICC in the late May 2001 timeframe (R4, tab 75; tr. 8/156-57). The minutes of the 19 July 2001 construction meeting reflect his authorization to SRC to proceed with DynaClad flashing on the walls of Roof Cells D and F (R4, tab 94).

The Navy concedes that it directed SRC to use a three-ply flashing system based upon its reading of the contract documents (gov't br. at 54 n.25). It does not concede that it directed SRC to install DynaClad instead of the three-ply flashing. LT Hale could not remember whether there was a direction to use DynaClad on either the main roof or penthouse parapet walls (tr. 8/141-42).

SRC began installing the base flashing, which the Navy agrees included some DynaClad, on 9 February 2001. It completed installation of DynaClad on the parapet walls on 4 September 2001. (Supp. R4, tab 380, Rpt. No. 170; ex. G-2, tab C14) SRC installed DynaClad on all of the main roof and penthouse parapet walls (tr. 2/209-10). There is no evidence that SRC ever attempted to install a three-ply waterproofing system on any of the parapet walls using any of the products identified by the Navy.

By a letter dated 1 December 2001, Mr. Airaghi informed SRC that it was not entitled to an equitable adjustment for installation of the DynaClad parapet wall flashing. He noted that New Work Note 25, applicable to detail 1 on Sheet A37 of the contract drawings, specified "WATERPROOFING MEMBRANES (3-PLY)" and that New Work Note 2, applicable to Detail 1 on Sheet A38, and New Work Note 15, applicable to Detail 1 on

Sheet A40, specified “WATERPROOFING MEMBRANE (3 LAYERS).” He observed that the terms “Ply” and “Layers” are not used to describe paint and conceded the government had inadvertently omitted a specification for the three-ply waterproofing membrane, but concluded that SRC was required to provide a product of the quality shown on the drawings. He found the DynaClad wall flashing system to be an acceptable substitute as a no cost deviation because the costs were approximately the same and invited SRC to request a contracting officer’s decision if it disagreed with his determination. (Supp. R4, tab 356; tr. 6(2)/20-21, 204-06) SRC converted its request into a certified claim on 18 April 2003 (R4, tab 147).

### *Interpretations of the Contract Requirements*

Mr. DeLauney’s interpretation of the work required for the parapet walls began with Demolition Note 23 and New Work Note 61 on Sheet A2 and contract specification section 09900, PAINTS AND COATINGS, in particular paragraphs 1.9.3, “Exterior Painting,” and 3.4.7, “Coating Systems,” including its Table 3 (tr. 2/165-87). He also observed that New Work Notes 28 and 29 on Sheet A2 required existing painted concrete and brick to be prepped and repainted Color No. 1 and that General Work Notes 12 and 18 on Sheet A3 described similar work (ex. G-4 at 3, 4 of 45; R4, tab 25; tr. 2/169, 187-88). He looked at the other contract drawings depicting parapet wall work, in particular Sheet A8 with General Note 2, referring back to Sheets A2 and A3, and Elevation 4, “EXTERIOR ELEVATION – W,” combining Demolition Note 23 and New Work Note 61 and designating the work as “typical” for the interior side of the penthouse parapet walls. (Ex. G-4 at 9 of 45; tr. 2/174-75) He concluded that the parapet walls were to be cleaned and painted and understood the use of the word “typical” to indicate that the combined detail would not be repeated again in the drawings (tr. 2/175-76). “[T]here was no thought in [his] mind [that] it would be anything other than painting” (tr. 2/194).

With respect to Detail 1 on Sheet A38, “TYPICAL FLASHING DETAIL @ ROOF DRAINS & PARAPET WALLS,” Mr. DeLauney interpreted New Work Note 2, “WATERPROOFING MEMBRANE (3 LAYERS),” to require three coats of paint (tr. 2/189; ex. G-4 at 39 of 45). He thought that New Work Note 28 depicted a reglet or saw cut where metal would be inserted and caulked to keep the water from penetrating, indicating to him that it was a two-part waterproofing system, with paint on the upper part (tr. 2/190-93).

In contrast, because of the word “ply,” Mr. DeLauney interpreted New Work Note 25, “WATERPROOFING MEMBRANES (3-PLY),” depicted in Detail 1 on Sheet A37, “TYP[ICAL] BLDG. EXP[ANSION] JOINT DETAIL @ PENTHOUSE WALLS,” to relate to a layer of roofing membrane (tr. 2/188-89; ex. G-4 at 36 of 45).

The individual who drafted the contract drawings did not testify at the hearing. When Mr. Greenfield reviewed the drawings, he tried to clarify Detail 1 on Sheet A38 by including three separate lines running vertically up the inside of the parapet wall and over the woodblocking on top of the wall to which he intended New Work Note 2 to apply. He explained that New Work Note 19 referred to the multi-ply membrane base flashing that runs along the roof and up the wall, underneath the three layers of waterproofing membrane. (Tr. 7/26-27) In his mind, the word “coating,” not the word “layer,” is used to refer to paint (tr. 7/35). He explained that New Work Note 28 on Sheet A38 relates to the penthouse wall, not the parapet wall (tr. 7/28).

Mr. Greenfield drew a sketch to explain the differences between the work performed on the parapet walls of Roof Cells A and B and the work specified for Roof Cells C through J. Unlike Roof Cells A and B, his sketch for Roof Cells C through J does not show counterflashing where the base roof flashing terminates on the inside of the parapet wall. (Ex. G-8; tr. 7/29-34) At the time he prepared the government estimate, he did not know what specific waterproofing product the designer had intended be used and estimated the cost of “Bituminous waterproofing, mopped, 3 plies #15 felt” based upon a product in the RS Means estimating manual that he thought was similar to what had been specified (supp. R4, tab 201 at 6; tr. 7/9-15, 60-65).

Using Sheet A14, which relates to elevator penthouse #6 on Roof Cell F, as an example, Mr. Greenfield referred to Elevation 1, “EXTERIOR ELEVATION – N,” and expressed the view that the penthouse parapet walls were to be cleaned and painted, citing New Work Notes 28 and 29 from drawing Sheet A2 which were identified as “typical” and referenced in General Note 2 (ex. G-4 at 3, 15 of 45; tr. 7/37-39).

Mr. Mark deOgburn is a NAVFAC subject matter expert in roofing (tr. 9/166). He was not permitted to testify as an expert on the contract interpretation issues associated with the parapet walls. *See Litton Systems, Inc., Applied Technology Division, ASBCA No. 36976, 93-2 BCA ¶ 25,705 at 127,887-88.* However, like Mr. DeLauney, he explained his interpretation of the contract drawings from the viewpoint of someone with a roofing background. His interpretation is the interpretation upon which the Navy now relies. (Tr. 9/166, 209, 213) He separated the parapet wall work into four categories: the main roof parapet walls on Roof Cells A and B; the penthouse parapet walls for Roof Cells A and B; the main roof parapet walls on Roof Cells C through J; and the penthouse parapet walls for Roof Cells C through J (tr. 9/238-39).

With respect to Roof Cells A and B, he thought that the combination of Demolition Note 23 with New Work Note 61, designated as “typical” in two locations on Elevation 4, “EXTERIOR ELEVATION –W,” on Sheet A8, required SRC to clean and paint both the main roof and the penthouse parapet walls, one of the designations relating to stair penthouse #6 and the other to the main roof parapet wall on Roof Cell A. He

acknowledged that everyone else involved with the project interpreted the contract as indicating that only the penthouses on Roof Cells A and B were part of the specified work. (Tr. 9/240-43, 10/46-49)

With respect to the main roof parapet walls for Roof Cells C through J, Mr. deOgburn interpreted New Work Note 2 and the three lines Mr. Greenfield had added to Detail 1 on Sheet A38 as requiring three plies of felt running along the roof to the top of the wood nailers and then up and over the top of the parapet wall (tr. 9/231-32, 244). He thought the lines represented a membrane that was approximately 1/2-inch thick (ex. G-1 at 2). It was his view that metal counterflashing would be necessary where the base flashing terminated if the wall was going to be painted instead of clad with a three-ply waterproofing material (tr. 9/233).

As to the penthouse parapet walls for Roof Cells C through J, Mr. deOgburn looked first at the “ROOF PLAN – ELEV[ATOR] P[ENT]HOUSE #3” for Roof Cell C on Sheet A9, where Detail 1 referred to Sheet A40. On Sheet A40, he looked at Detail 1, “TYPICAL SCUPPER DETAIL @ PENTHOUSES & BRIDGE ROOFS,” which refers to New Work Note 15, “WATERPROOF MEMBRANE (3 LAYERS),” and shows three lines on the inside parapet wall that extend up the wall to a cut line which prevents determination of how far up the wall the waterproof membrane is to extend. He then returned to Sheet A9 and Elevation 1, “EXTERIOR ELEVATION – N,” where he observed that New Work Note 27 from Sheet A2 was identified as “TYP[ICAL].” New Work Note 27 states: “PROVIDE SHEET METAL COPING, DETAIL 1/A38 SIMILAR.” Mr. deOgburn thought that this was a cross-reference for the parapet wall work that was missing on Sheet A40 because of the cut line and concluded that the penthouse parapet walls, like the main roof parapet walls, for Roof Cells C through J were to be clad with a three-ply waterproofing membrane system. (Ex. G-4 at 3, 10, 39, 41 of 45; tr. 9/244-45, 10/50-51)

### *Quantum*

SRC bid a lump sum subcontract amount of \$8,200 to apply three coats of waterproofing paint to 12,269 square feet of parapet walls (app. supp. R4, tab 152 at 10 of 17). However, Mr. DeLauney used RS Means to estimate a credit to the Navy for this work that more closely approximates what SRC’s actual costs would have been had it painted the inside of the parapet walls (tr. 8(2)/273-74). The parties are in agreement that, exclusive of profit, FCCOM and bonding, Mr. DeLauney’s estimate of \$14,178 as the cost of painting all of the parapet walls is reasonable. This estimate includes \$5,153 of direct labor costs. (Ex. A-2, tab B; ARSOC, tab 12 at 44-46; tr. 10(2)/90)

Ms. Moser’s revised calculation of the cost of wrapping the parapet walls with DynaClad is \$128,597.99 including profit (ex. A-2, tab B). DCAA computed the cost to

be \$118,180 (ARSOC, tab 12 at 36-37). Both verified a cost of \$36,835 for materials, which included 30,300 square feet of DynaClad, and to which sales tax is added. After DCAA questioned the \$10.25 per hour claimed for direct labor for lack of support, SRC agreed to use the \$10.00 per hour rate used by DCAA. (ARSOC, tab 12 at 36, 39; tr. 8(2)/146-47, 10(2)/196) SRC computed 2456 labor hours, \$24,560, and DCAA computed 2455 labor hours, \$24,550, a difference of just \$10 which we resolve in favor of SRC. Both used 201 hours of supervisor/foreman hours. (Ex. A-2, tab B; ARSOC, tab 12 at 39) We found that the rate computed by appellant, \$16.62, is the rate that should be used. Thus, the direct cost of the supervisor/foreman is the amount computed by appellant, \$3,344 and the total direct labor cost is \$27,904. (Ex. A-2, tab B) Both Ms. Moser and Ms. Ambrose computed subcontractor costs with mark-ups to be \$11,118 (ex. A-2, tab B; ARSOC, tab 12 at 39). With stipulated mark-ups, the costs, excluding profit, FCCOM and bond costs, total \$112,369.96 (ex. A-2, tab B). The costs for applying DynaClad to Roof Cell K under Modification No. P00007 are not included in the parapet wall claim (tr. 9(2)/90-92).

Mr. Airaghi prepared an estimate of what he thought it should have cost to apply a three-ply waterproofing system. He calculated the actual area of the parapet walls, except the penthouse parapet walls on Roof Cells A and B, to be 26,466 square feet. (ARSOC, tab 15(A)) He used a three-ply GAF GLAS product from RS Means because he thought it was one of the products that could have been applied to the parapet wall (tr. 9(2)/206). He subjectively reduced the RS Means price of the GAF product because he thought it was too high. Similarly, he reduced the labor hours claimed by SRC because he thought they were overstated. (Tr. 9(2)206-09, 10(2)/14) He used the stipulated roofer rate of \$11.15, but it does not appear he included any cost for a supervisor/foreman in his calculation (ARSOC, tab 15(A)). He also did not include any subcontractor costs (ARSOC, tab 15(A)). His estimate of the cost to install 26,466 square feet of the GAF product was \$52,226 (ARSOC, tab 15(A)). He did not perform an estimate using the DynaClad product (tr. 10(2)/9).

Mr. Airaghi did not use the government's pre-bid estimate in anyway for his estimate (tr. 10(2)/9-10), and the Navy does not rely upon it. The pre-bid estimate indicates it would cost \$20,283 to install three-ply waterproofing material on 14,451 square feet on the main roof parapet walls. Consistent with his interpretation of the contract drawings, it appears that Mr. Greenfield did not include the penthouse parapet walls in the pre-bid estimate. (R4, tab 201; tr. 7/7-14, 61-62, 67, 76)

## DISCUSSION

SRC has the burden of proving entitlement to its claimed costs. In order to prevail, SRC must prove the fundamental facts of liability and damages, that is, each of the necessary elements of liability, causation, and resultant injury. *Wilner v. United*

*States*, 24 F.3d 1397, 1401 (Fed. Cir. 1994); *P&C Placement Services, Inc.*, ASBCA No. 54124, 06-2 BCA ¶ 33,373 at 165,443. As to the quantum of resultant injury, SRC must show that the claimed costs were incurred. *See LA Limited, LA Hizmet Isletmeleri*, ASBCA No. 53447, 04-1 BCA ¶ 32,478 at 160,635. It must also show that the claimed costs are reasonable, allowable and allocable to the contract. *See ITT Federal Services Corp. v. Widnall*, 132 F.3d 1448, 1451 (Fed. Cir. 1997). The proof must be sufficiently certain so that a determination as to the amount for which the government is liable is more than mere speculation. *Lisbon Contractors, Inc. v. United States*, 828 F.2d 759, 767 (Fed. Cir. 1987).

ASBCA No. 54854  
Parapet Walls – Entitlement

The parapet wall claim involves questions of contract interpretation. To prevail upon its parapet wall claim, SRC initially must demonstrate either that its interpretation of the contract is the only reasonable interpretation or that the contract was ambiguous. The rules of contract interpretation are settled. We are to read the contract as a whole and give it meaning that makes sense. A contract is unambiguous if there is only one reasonable interpretation. *C. Sanchez and Son, Inc. v. United States*, 6 F.3d 1539, 1544 (Fed. Cir. 1993). Conversely, a contract is ambiguous if it is susceptible to more than one reasonable interpretation. *See Lockheed Martin IR Imaging Systems, Inc. v. West*, 108 F.3d 319, 322 (Fed. Cir. 1997). It is not enough to demonstrate that there are two different interpretations; rather, both must be within the “zone of reasonableness.” *Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 751 (Fed. Cir. 1999). Ambiguities will be construed against the government as the drafter under the doctrine of *contra proferentem*, so long as the contractor relied upon its interpretation during bid preparation. *Fruin-Colnon Corp. v. United States*, 912 F.2d 1426, 1430 (Fed. Cir. 1990). An ambiguity is patent if it contains glaring errors or patently obvious conflicts. *Comtrol, Inc. v. United States*, 294 F.3d 1357, 1364 (Fed. Cir. 2002). A party must seek clarification of a patent ambiguity or be barred from recovery. *Hunt Construction Group, Inc. v. United States*, 281 F.3d 1369, 1375 (Fed. Cir. 2002).

SRC interpreted the contract documents and drawings as requiring it to clean and apply three layers of waterproofing paint on the inside of all of the parapet walls, except for those on the main roof of Roof Cells A and B. It asserts that its interpretation was reasonable and is consistent with the practice of painting to provide waterproofing, the work previously performed by RayCo on Roof Cells A and B, and the general description of the contract work. It contends that the Navy should have specified a ply system on Sheet A38 for the parapet walls if that is what it wanted, just as it did on Sheet A37 in New Work Note 25 for the expansion joints. It also complains that the product information provided after bid was not appropriate to the project because it was restricted to wall heights of 24 inches.

The Navy agrees that the main purpose of the contract was demolition and replacement of Roof Cells C through J. It contends that the parapet walls on the main roof and penthouses of Roof Cells C through J were to be wrapped with three plies of felt as shown on Detail 1 of Sheet A38. It asserts that this is different than the work performed on Roof Cells A and B by RayCo because Sheet A38 depicts both base flashing and waterproofing membrane, but not any counterflashing above the base flashing. Its present position, based upon Mr. deOgburn's testimony, is that the main roof and penthouse parapet walls on Roof Cells A and B were only to be cleaned and painted. (Gov't br. at 56)

The Navy asserts that SRC's interpretation is unreasonable because it renders meaningless Detail 1 on Sheet A38, and all the cross-references to it. The Navy also contends that SRC's interpretation creates a patent ambiguity because if SRC assumed Detail 1 on Sheet A38 had no meaning, it should have inquired.

The parties did not differentiate between the main roof and penthouse parapet walls in the interpretations each advanced during contract performance. However, the evidence adduced at trial established that there are differences. First, based upon the testimony of Messrs. DeLauney and deOgburn, both parties now interpret Sheet A8 as indicating that the penthouse parapet walls on Roof Cells A and B were to be cleaned and painted. This is the interpretation upon which SRC relied at the time of bid. *See Fruin-Colnon Corp., supra*. Accordingly, we consider the contract interpretation issue relating to the penthouse parapet walls on Roof Cells A and B to be resolved in favor of SRC.

We note that Mr. Greenfield also thought they were to be painted, although the Navy now disavows his testimony because he interpreted the references to New Work Notes 28 and 29 on Sheet A14 as indicating that *all* of the penthouse parapet walls were to be cleaned and painted (gov't br. at 37 n.21). We reach no conclusion as to Mr. deOgburn's reading of Sheet A8 as indicating that the main roof parapet walls on Roof Cells A and B were also to be cleaned and painted inasmuch as he acknowledged his view was contrary to that of everyone involved in the project. It also is contrary to the work actually performed.

With respect to the work required for the parapet walls on the main roof and penthouses for Roof Cells C through J, we conclude that SRC's interpretation is not within the zone of reason. SRC relied principally upon Elevation 4 on Sheet A8 that combined Demolition Note 23 and New Work Note 61 from Sheet A2 and designated the work as "TYP[ICAL]." Sheet A8 specifies the work to be performed on the penthouses on Roof Cells A and B, not work on the main roofs and penthouses of Roof Cells C

through J. Further, the New Work Notes on Sheet A2 are only applicable to Sheets A8 through A36, which relate to the penthouses.

Use of the word “typical” with contract drawing notes signifies that the “depicted matter be followed at all locations in the drawings where identical conditions exist without need of reference [to the notes].” *Mountain States Mechanical, Inc.*, ASBCA No. 35250, 91-2 BCA ¶ 23,779 at 119,100. Thus, we consider the “typical” designation in Elevation 4 on Sheet A8 to be applicable to identical conditions on the penthouse parapet walls on Roof Cells A and B. There was no showing that the drawings for the main roofs and penthouses for Roof Cells C through J reflected identical conditions.

Moreover, SRC’s interpretation does not fully consider the other drawings, in particular Sheet A38. Detail 1 at the drain on Sheet A4 is designated “TYPICAL” and refers to Sheet A38. New Work Note 61 from Sheet A2 is not applicable to either Sheets A4 or A38. Detail 1 on Sheet A38 is captioned “TYPICAL FLASHING DETAIL @ ROOF DRAINS & PARAPET WALLS” and depicts multiple-ply membrane base flashing (New Work Note 19) running along the roof and up the inside of the parapet wall to a termination point at the top of the wood nailers. Three lines, added by Mr. Greenfield to reflect three layers of waterproofing membrane (New Work Note 2), begin at the terminated base flashing and continue up the inside and over the top of the main roof parapet wall. Contrary to Mr. deOgburn’s testimony, however, Sheet A38 does not reflect any indication that the waterproofing membrane layers were supposed to be ½-inch thick.

New Work Note 2 on Sheet A38 specified “WATERPROOFING MEMBRANE (3 LAYERS),” which was also specified by New Work Note 15 on Sheet A40. In contrast, New Work Note 25 on Sheet A37 specified “WATERPROOFING MEMBRANES (3-PLY).” Although painting may be an acceptable method of waterproofing in the industry and was used by RayCo, we are not persuaded that use of the words “3 layers” and “3-ply” to describe the waterproofing membranes in this case describe paint. Indeed, Section 09900 of the specifications, upon which SRC relies, is entitled: “PAINTS AND COATINGS” (emphasis added). Similarly, paragraphs 1.9.3 and 3.7.4, including Table 3, use the words “coats,” “coated” surfaces and “coating system.” And, unlike the work performed by RayCo, there was no counter flashing depicted on Sheet A38 at the termination point of the base flashing because New Work Note 28 relates to the penthouse wall, not the parapet wall.

New Work Notes 5 on Sheet A37 and 19 on Sheet A38 called for “MULTIPLE – PLY MEMBRANE BASE FLASHING.” While there was a specification for the base flashing, there was no specification for the waterproofing membrane, which had inadvertently been omitted. SRC correctly understood use of the word “ply” in New Work Notes 5 and

19 to refer to flashing material, but did not apply the same understanding of the word to New Work Note 25 on Sheet A37. Finally, its broad contention that the waterproofing membrane product information supplied to it by the Navy was restricted to wall heights of 24 inches is not supported by the evidence since it appears that the Johns Manville and Owens-Corning products suggested by the Navy in its 9 February 2001 letter could have been used, albeit with some modifications.

Remaining is the interpretation of the work required for the penthouse parapet walls on Roof Cells C through J. As we found, SRC applied the same interpretation to all of the parapet wall work. Mr. Greenfield looked at Elevation 1, “EXTERIOR ELEVATION – N,” on Sheet A14, cited New Work Notes 28 and 29 from Sheet A2, and also concluded the penthouse parapet walls were to be cleaned and painted. The Navy suggests Mr. Greenfield was mistaken because he was only shown Sheet A37, and not Sheets A9 through A16, on cross-examination. We believe his testimony indicates some confusion, but it was testimony given on direct examination. In any event, his interpretation is in direct conflict with the references to New Work Note 27 on the penthouse parapet walls shown on Sheets A9 through A17 and A19 through A21.

New Work Note 27 is explained on Sheet A2 with reference back to Detail 1 on Sheet A38. Mr. deOgburn explained that New Work Note 27 completed the description of the work required for the penthouse parapet walls on Roof Cells C through J, which began with Detail 1 “ROOF PLAN – ELEV[ATOR] P[ENT]H[OUSE] #3,” on Sheet A9 and led to Sheet A40, Detail 1, “TYPICAL SCUPPER DETAIL @ PENTHOUSES & BRIDGE ROOFS,” where three lines depicted on the inside of the parapet walls reflected three layers of waterproof membrane (New Work Note 15). While the drawings may not be crystal clear, we are satisfied that SRC had only to perform a reasonably careful review of the drawings to determine that the penthouse parapet walls, like the main roof parapet walls, on Roof Cells C through J were to be clad with three-ply waterproofing membrane. *See Federal Contracting, Inc.*, ASBCA No. 48280, 95-2 BCA ¶ 27,792; *Plano Bridge & Culvert*, ASBCA No. 36532, 91-1 BCA ¶ 23,654.

Based upon the foregoing, we conclude that SRC’s interpretation of the work specified for the main roof and penthouse parapet walls on Roof Cells C through J is unreasonable because it does not consider all of the drawings and specifications. At a minimum, there was a patent ambiguity in the specifications and drawings arising out of the references to “coats,” “layers” and “plies” about which SRC was obligated to inquire.

In sum, we conclude that SRC has demonstrated that its interpretation of the contract documents as indicating the penthouse parapet walls on Roof Cells A and B were to be painted is reasonable. Its belief that the main roof and penthouse parapet walls on Roof Cells C through J were also to be painted, however, is not within the zone

of reasonableness. SRC is entitled to an appropriate equitable adjustment for the cost of wrapping the penthouse parapet walls on Roof Cells A and B instead of painting them.

### Parapet Walls – Quantum

The formula for measuring the quantum of an equitable adjustment is the difference between the reasonable cost of performing without the change and the reasonable cost of performing with the change. *See Sauer, Inc. v. Danzig*, 224 F.3d 1340, 1348 (Fed. Cir. 2000). The purpose is to make the contractor whole. *See Precision Dynamics, Inc.*, ASBCA No. 50519, 05-2 BCA ¶ 33,071 at 163,926. This includes “a reasonable and customary allowance for profit.” *See Stewart & Stevenson Services, Inc.*, ASBCA No. 43631, 97-2 BCA ¶ 29,252 at 145,522 *citing United States v. Callahan*, 317 U.S. 56, 61 (1942).

### *The Reasonable Cost of Painting the Walls*

The parties stipulated that Mr. DeLauney’s cost estimate of \$14,178 to paint the parapet walls, exclusive of profit, FCCOM and bonding, was reasonable. As we found, the FCCOM and bonding rates were stipulated.

Still at issue is the question of a reasonable and customary profit. We are not persuaded that the 14.37% profit bid by SRC is either reasonable or customary. During contract performance, SRC used 7% for its cost proposals and agreed to 7% profit in bilateral Modification No. P00006. Further, 7% is within SRC’s company-wide average. The typical profit rate on construction contracts at the NOB, Norfolk is between 7 and 9 percent and there was no showing of any special difficulty or risk associated with this contract. The Navy computed 7% as a reasonable profit objective for negotiations with SRC using the DFARS 215.404-71 weighted guidelines method. While we certainly are not bound to use the weighted guidelines, *Texas Instruments, Inc.*, ASBCA No. 27113, 90-1 BCA ¶ 22,537, we have recognized the use of the guidelines as an appropriate method of arriving at a reasonable profit in the absence of any showing of unusual risk factors. *See Doyle Construction Co.*, ASBCA No. 44883, 94-2 BCA ¶ 26,832 at 133,463. The 7% profit computed using the guidelines in this case represents a reasonable profit.

The Navy asserted that the increase from 7% to 14.37% profit constitutes a new profit claim that was never presented to the contracting officer over which we lack jurisdiction (gov’t br. at 31-32). Our conclusion renders this argument moot. In any event, the Navy concedes that we have jurisdiction to determine a reasonable profit for the remaining claim items (gov’t br. at 32 n.16).

The Navy also contends that Home Office/G&A should be excluded from the profit calculation under the weighted guidelines version of DFARS 215.404-71 in effect until 26 April 2002, when it was amended to include G&A expense in the cost base used to determine profit objectives. SRC disagrees. Its position is that DFARS 215.404-71 and DD Form 1547 merely provide guidance for use in negotiating contract cost proposals and further that the only claims definitized prior to 26 April 2002 are those included in Modification No. P00006.

We conclude that G&A should not be excluded from the profit calculation. As we stated above, we are not bound by the DFARS 215.404-71 weighted guidelines. Significantly, however, the guidelines were amended effective 26 April 2002 to include G&A in the profit objective for negotiating contract cost proposals. The amended version of the DFARS was applicable at the time SRC converted its REA into certified claims and it is applicable now. G&A should not be excluded from the profit calculation.

With stipulated costs of \$14,178, profit of \$992 (at 7%), FCCOM mark-up of \$1 (at 0.0166% applied to \$5,153 of direct labor costs as per the parties' calculations) and bond mark-up of \$7 (at 0.045% applied to total costs plus profit, excluding FCCOM, of \$15,170), the total estimated cost of painting the parapet walls is \$15,178. This is \$1.24 per square foot. Based upon the stipulation of the parties, we find this to be the reasonable cost of painting the parapet walls.

#### *The Reasonable Cost of the Changed Work*

In order to quantify the cost of the changed work, the Navy asserts that we should use the cost estimate prepared by Mr. Airaghi and not the actual costs SRC incurred to install the DynaClad. This is contrary to its position at the time of the contract interpretation disagreement when the Navy was adamant in its view that DynaClad was a no cost change.

In any event, we consider Mr. Airaghi's estimate to be unreliable for a number of reasons. First, it appears to be based upon the GAF product determined to be unsuitable for Building W-143. Next, both the cost of the GAF product as well as the number of hours estimated were reduced for subjective reasons, the latter of which appears to reflect the Navy's unproven belief that SRC expended too many man hours applying DynaClad. Further, the estimate did not include any amount for the supervisor/foreman or subcontract work.

In contrast, SRC's claim for the cost of installing DynaClad was reviewed by its auditor and DCAA. They agreed upon the actual costs of materials, which included 30,300 square feet of DynaClad, the number of direct labor and supervisor/foreman hours (except for a difference of one hour) and the respective hourly rates. Accordingly, we

consider SRC's actual costs to be a more reliable basis for determining the reasonable cost to perform the changed work.

We resolved the dispute over the hourly rate for the supervisor/foreman in favor of SRC, at \$16.62 per hour. We resolved the profit dispute in favor of the Navy, at 7%. With total costs of \$112,369.96, profit of \$7,866 (at 7%), FCCOM of \$5 (the stipulated 0.0166 % of direct labor costs of \$27,904), and bond costs of \$54 (the stipulated 0.045% of \$120,236 in total costs and profit, excluding FCCOM), the total cost of installing DynaClad was \$120,295. This is \$3.97 per square foot.

The reasonable cost of painting the parapet walls on the penthouses of Roof Cells A and B was \$1.24 per square foot. The reasonable cost of covering these walls with waterproofing membrane was \$3.97 per square foot. SRC is entitled to recover \$2.73 per square foot. We are unable to determine the exact number of square feet of the penthouse parapet walls on Roof Cells A and B, and direct the parties to compute that figure and multiply it by \$2.73.

#### CONCLUSION

SRC's interpretation of the contract as requiring it to paint the inside of the parapet walls was reasonable as to the penthouses on Roof Cells A and B. It is entitled to recover \$2.73 per square foot as the additional cost of having to install waterproof membrane flashing. The parties are directed to compute the number of square feet of DynaClad installed by SRC on the penthouse parapet walls on Roof Cells A and B and multiply it by \$2.73. Interest on the product of that computation will run under the CDA from 21 April 2003. The appeal in ASBCA No. 54854 is sustained to the extent indicated and otherwise denied.

Dated: 10 July 2008

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CAROL N. PARK-CONROY  
Administrative Judge  
Armed Services Board  
of Contract Appeals

I concur

I concur

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MARK N. STEMLER  
Administrative Judge

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EUNICE W. THOMAS  
Administrative Judge

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Acting Chairman  
Armed Services Board  
of Contract Appeals

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Vice Chairman  
Armed Services Board  
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 54854, Appeal of States Roofing Corporation, rendered in conformance with the Board's Charter.

Dated:

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CATHERINE A. STANTON  
Recorder, Armed Services  
Board of Contract Appeals