

(Filed February 23, 2005)

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GEORGE SOLLITT
CONSTRUCTION CO.,

Plaintiff,

v.

THE UNITED STATES,

Defendant.

* Trial; Contracts; Equitable Adjustment;
* Contract Disputes Act, 41 U.S.C. §§ 601-
* 613 (2000); Compensable Delay; Excusable
* Delay, Proof of Costs of Changed Contract
* Work; Discretion to Award Performance
* Award on Public Contract, Inapplicability of
* Prompt Payment Act, 31 U.S.C. §§ 3901-
* 3907 (2000)
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Timothy J. Riordan, Chicago, IL, for plaintiff.

John S. Groat, with whom were Peter D. Keisler, Assistant Attorney General, David M. Cohen, Director, and Donald E. Kinner, Assistant Director, Washington, D.C., for defendant. Timothy J. Hyland, Department of the Navy, Great Lakes, IL, of counsel.

OPINION

BUSH, Judge

This construction contract dispute is before the court following a trial in August 2003. Pre- and post-trial briefs have been filed by the parties.¹ An extensive record of the trial is embodied in the transcript (Tr.), joint exhibits (JE), government exhibits (GE), and Sollitt exhibits (SE). The fact

^{1/} Filings include Sollitt Statement of Issues of Fact and Law (Sollitt Issues), Sollitt Memorandum of Contentions of Law (Sollitt Law Mem.), Sollitt Memorandum of Contentions of Fact (Sollitt Facts), Defendant’s Memorandum of Contentions of Fact and Law (Def.’s Mem.), Agreed Statement of Facts filed July 16, 2003 (Agreed Facts), Sollitt Post-Trial Brief (Sollitt Br.), Defendant’s Post-Trial Brief (Def.’s Br.), Sollitt Reply to Defendant’s Post-Trial Brief (Sollitt Reply), and Sollitt Motion to Reopen Case for Admission of Additional Documents into Evidence (Sollitt Supp.). When quoting plaintiff, “SOLLITT” has been altered to “Sollitt.”

witnesses for both parties² were helpful and for the most part credible, and the expert witnesses³ contributed their insights into construction delay estimates. This opinion resolves all outstanding issues⁴ in this case.

BACKGROUND

I. Factual Background

On February 27, 1995, the United States Department of the Navy (Navy) awarded George Sollitt Construction Company (Sollitt) contract N62467-94-C-0971 for the renovation of two existing buildings (Buildings 122 and 2B), an addition to Building 122 to house a “ship’s trainer,” and new construction of a Pump House and two “Range Buildings,” all at the Naval Training Center, Great Lakes, Illinois (NTC).

The contract work, valued at \$15,450,000 and scheduled to begin on March 14, 1995, was to be conducted in three phases. Phase I of the contract required Sollitt to complete the renovation of Building 122, build an addition to that building, (Area C, housing the ship’s trainer) and construct two Range Buildings by February 7, 1996. Phase II of the contract involved the renovation of Building 2B, and also included the cost of a new Pump House for the installation of fire protection pumping equipment. Phase II was to be completed by May 31, 1996. Phase III of the contract required Sollitt to complete site work and landscaping, including installation of new concrete paving, curbs, sidewalks,

^{2/} Sollitt’s fact witnesses included Mr. Donald Maziarka, the company’s president at the time of contract performance and chair of Sollitt’s board of directors at the time of trial; Mr. Howard Strong, the company’s vice president for field operations at the time of contract performance and Sollitt’s president at the time of trial; and Mr. James P. Zielinski, the company’s sole project manager for this project at the time of contract performance and a Sollitt vice president at the time of trial. Sollitt also called Mr. Matthew J. Stahl, a former civilian employee of the Navy based at Great Lakes, Illinois, who was Deputy Resident Officer in Charge of Construction (ROICC) there until his retirement on April 15, 1996. Both Sollitt and the Navy called Lt. George E. Odorizzi, whose rank in 1995-96 is unknown, who was the project manager of this project for the ROICC, a role he described as “the primary liaison between the contracting officer, the . . . architect/engineer [A&E, in this case C.H. Guernsey & Company (Guernsey)] and the contractor.” Tr. at 2349. Mr. Zielinski and Lt. Odorizzi had extensive knowledge and memory of construction activities on the project and their testimony was especially valued by the court.

^{3/} Mr. Samuel Tipton was Sollitt’s expert on delay claims and produced two expert reports, JE 233 and JE 235. Mr. Wayne R. Dorn was the Navy’s expert on the same issue and produced one expert report, JE 382.

^{4/} Defendant’s pre-trial motion in limine was denied on the first day of trial, Tr. at 6-10.

steps, ramps and utility connections. Phase III was also to be completed by May 31, 1996.

This project was part of the Base Realignment and Closure (BRAC) process, mandated by Congress. The buildings being constructed or renovated at NTC would replace existing training schools at other Navy facilities that were scheduled for closing, or in certain cases, had already started the decommissioning process. According to the Navy's intended construction timeline, after Sollitt had completed the construction and renovation at NTC, a Navy follow-on contractor was scheduled to install specialized Navy equipment for the schools. This follow-on installation had to be accomplished prior to a "ready for training" date set by the closing of current schools. The Navy's follow-on contractor had a window of time scheduled for this project. If construction was delayed, the Navy's follow-on contractor would not be available to install equipment, due to other commitments, and the scheduled instruction would be interrupted and delayed. The parties entered into a partnering agreement, which included a provision for regular communication about construction problems and their solutions.

Notwithstanding the importance of timely completion, the construction phases were not completed on time.⁵ A variety of monetary disputes arose between the Navy and Sollitt during the course of construction, and Sollitt submitted a claim for equitable adjustment of the contract to the contracting officer on October 3, 1997. The contracting officer issued a final decision on December 21, 1998, and the Navy issued its final modification of the contract, Modification P00055, on April 28, 1999. On December 6, 1999, Sollitt filed its complaint in this court. An audit of Sollitt's claim was performed by the Defense Contract Audit Agency (DCAA audit), which found that "the claim is an acceptable basis for negotiation of a fair and reasonable settlement amount." JE 231. However, no settlement was achieved and trial was held in August 2003.

II. Legal Issues

A. Index of Legal Issues Presented by the Counts

Sollitt's claims have been grouped into nineteen counts. Several of these counts are further divided into subparts related to specific contract work items. In this section of the opinion, the court first provides an index of the legal issues found in the contested⁶ counts of Sollitt's complaint. The court then reviews the legal standards which apply to these issues. In the following section of the opinion, the court proceeds count by count (and subpart by subpart) to apply the pertinent legal standard to each claim presented in this case and to award Sollitt damages where they are due.

^{5/} By September 4, 1996, Sollitt had substantially completed work on the contract, although specific benchmarks of completion are disputed by the parties.

^{6/} Counts III and XVII have been entirely withdrawn, and portions of Count XV have been withdrawn.

1. Compensable Delay

Compensable delay is the main issue in three counts of Sollitt's complaint: Count I asks primarily for extended overhead costs because of an allegedly justified equitable extension of the contract completion dates for Phases II and III of construction; Count II asks for increased labor costs because Phases I, II and III of construction were allegedly delayed by the Navy past the contract completion date and new and higher labor rates applied thereafter; and, Count IV asks for the extra costs of winter work allegedly caused by Navy delays.

2. Excusable Delay

Excusable Delay is the other issue set forth by plaintiff in Count I: Sollitt alleges that the Navy delayed construction and thus that the \$235,200 in liquidated damages assessed by the Navy should be returned to Sollitt.

3. Proof of Equitable Adjustment Claims

Proof of equitable adjustment claims for work added to or deducted from the contract is the issue asserted in Counts V through XV.

4. Navy's Discretionary Power to Grant or Deny Performance Awards

The scope of the Navy's discretionary power to grant or deny performance awards underlies Count XVIII.

5. Prompt Payment Act and Interest

Whether the Prompt Payment Act applies to provide interest on Sollitt's claims underlies Count XVI, a request for interest on Navy-deducted amounts from progress payments on Sollitt's monthly invoices, and Count XIX, a general request for interest on all claimed damages awarded to Sollitt in this suit. Both parties agree that the Contract Disputes Act, 41 U.S.C. §§ 601-613 (2000) (CDA) provision of interest applies to claims upon which Sollitt prevails.

B. Overview of Legal Issues

1. Compensable Delay

- a.** *Government liability for an equitable adjustment may lie when the government has caused delay to the contractor's performance*

Under the standard Suspension of Work clause found in government fixed-price construction

contracts, 48 C.F.R. § 52.242-14 (2004), the United States may be liable for causing delays to contract work.⁷ If the contractor suffers increased costs because of government action or inaction which effectively suspends the contractor's progress on contract work, this clause may provide a remedy. *E.g.*, *Merritt-Chapman & Scott Corp. v. United States*, 429 F.2d 431, 443-44 (Ct. Cl. 1970). Liability is just one element of proof that is required for a successful equitable adjustment claim, however. The Federal Circuit has stated that three elements are required to justify an equitable adjustment to a contract: "liability, causation, and resultant injury." *Servidone Constr. Corp. v. United States*, 931 F.2d 860, 861 (Fed. Cir. 1991) (citing *Wunderlich Contracting Co. v. United States*, 351 F.2d 956, 968 (Ct. Cl. 1965)).

b. Government liability is limited to its unreasonable delays

^{7/} Although the parties did not proffer evidence that this clause is in the contract at issue here, the standard Suspension of Work clause was then and continues to be required by regulation. *See* 48 C.F.R. § 52.212-12 (1994) ("As prescribed in [Section] 12.505(a), insert the following [Suspension of Work] clause in solicitations and contracts when a fixed-price construction or architect-engineer contract is contemplated . . ."); 48 C.F.R. § 42.1305(a) (2004) ("The contracting officer shall insert the clause at 52.242-14, Suspension of Work, in solicitations and contracts when a fixed-price construction or architect-engineer contract is contemplated."). Defendant cites cases for their propositions concerning recovery under the Suspension of Work clause. Def.'s Br. at 13-14, 16. Because of the regulatory requirement to include the standard Suspension of Work clause, and because plaintiff has failed to challenge the government's presumptive inclusion of the clause, the court finds that the contract here included the standard Suspension of Work clause, now codified at 48 C.F.R. § 52.242-14 (2004) with no changes to the relevant text. Similarly, the court finds that the standard Differing Site Conditions, 48 C.F.R. § 52.236-2 (1994) (unchanged in relevant part at 48 C.F.R. § 52.236-2 (2004), and Changes, 48 C.F.R. § 52.243-4 (1994) (identical text at 48 C.F.R. § 52.243-4 (2004)), clauses were included in the contract at issue in this case. *See* Def.'s Mem. at 5 (asserting that "[t]he contract included standard construction contracts clauses, including . . . FAR 52.243-4, Changes"); JE 35 (Modification P00002) (contract modification signed by both parties citing authority of the Differing Site Conditions Clause); JE 36 (Modification P00003) (contract modification signed by both parties citing authority of the Changes Clause). These clauses also have been the source of compensable delay recoveries in government construction contract litigation, *see Coley Props. Corp. v. United States*, 593 F.2d 380, 385 (Ct. Cl. 1979) (finding liability for delay damages under the Changes clause); *Baldi Bros. Constructors v. United States*, 50 Fed. Cl. 74, 78-79, 83, 85 (2001) (awarding delay damages under the Differing Site Conditions clause), but will not be addressed in the court's analysis here.

For the government to be found liable for an action or inaction that delays contract work, the delay in question must be unreasonable. See *John A. Johnson & Sons, Inc. v. United States*, 180 Ct. Cl. 969, 986 (1967) (*Johnson & Sons*) (approving and quoting the principle stated in the decision below that an equitable adjustment is warranted when “the resulting [government-caused] interruption or delay is for an unreasonable length of time causing additional expense or loss to a contractor”). Only unreasonable government delays are compensable because there are “some situations in which the government has a reasonable time to make changes before it becomes liable for delay.” *Essex Electro Eng’rs, Inc. v. Danzig*, 224 F.3d 1283, 1289 (Fed. Cir. 2000). The Suspension of Work clause employs the term *unreasonable* to describe compensable delays:

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer’s failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

48 C.F.R. § 52.212-12(b) (1994); 48 C.F.R. § 52.242-14(b) (2004). Whether a government-caused delay is reasonable or unreasonable depends on the particular circumstances of the case. *P.R. Burke Corp. v. United States*, 277 F.3d 1346, 1360 (Fed. Cir. 2002). “What is a reasonable period of time for the government to do a particular act under the contract is entirely dependent upon the circumstances of the particular case.” *Tri-Cor, Inc. v. United States*, 458 F.2d 112, 131 (Ct. Cl. 1972) (citing *Specialty Assembling & Packing Co. v. United States*, 355 F.2d 554, 565 (Ct. Cl. 1966)). Delays due to defective contract specifications, however, are *per se* unreasonable. *Essex Electro*, 224 F.3d at 1289.

c. *Government action or inaction must be the sole proximate cause of the delay*

For the government to be found to have caused compensable delay, the general rule is that the government must have been “the *sole* proximate cause of the contractor’s additional loss, and the contractor would not have been delayed for *any other reason* during that period.” *Triax-Pacific v. Stone*, 958 F.2d 351, 354 (Fed. Cir. 1992) (citing *Merritt-Chapman & Scott Corp. v. United*

States, 528 F.2d 1392, 1397 (Ct. Cl. 1976)). The “sole proximate cause” concept is also found in the text of the Suspension of Work clause:

However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

48 C.F.R. § 52.212-12(b) (1994); 48 C.F.R. § 52.242-14(b) (2004). Thus, even if the government has caused an unreasonable delay to contract work, that delay will not be compensable if the contractor, or some other factor not chargeable to the government, has caused a delay concurrent with the government-caused delay. In *Triax-Pacific*, for example, the Federal Circuit held that because the plaintiff had also caused delay to contract performance, it was not entitled to an equitable adjustment for government-caused delays under the Suspension of Work clause. 958 F.2d at 354.

d. *The burden of proof for compensable delay is borne by the contractor*

When an equitable adjustment is being sought for government-caused delay, “the contractor has the burden of proving the extent of the delay, that the delay was proximately caused by government action, and that the delay harmed the contractor.” *Wilner v. United States*, 24 F.3d 1397, 1401 (Fed. Cir. 1994) (en banc). In some cases, this burden may be met if the contractor proves four elements: the government’s delay was of unreasonable length, the government was the proximate cause of the contractor’s delayed performance, the contractor was injured, and there was no concurrent delay on the part of the contractor. *P.J. Dick Inc. v. Principi*, 324 F.3d 1364, 1374-75 (Fed. Cir. 2003); *CEMS, Inc. v. United States*, 59 Fed. Cl. 168, 230 (2003). Justification of an equitable adjustment for delay-related damages is more complex, however, when both parties have contributed to delays affecting the project.

e. *The contractor bears the burden of separating and apportioning concurrent delays*

The general rule barring recovery for government-caused unreasonable delay when there has been concurrent delay⁸ caused by the contractor does permit recovery, however, when “clear

⁸/ The exact definition of concurrent delay is not readily apparent from its use in contract law, although it is a term which has both temporal and causation aspects. Concurrent delays affect the same “delay period.” See *Tyger Constr. Co. v. United States*, 31 Fed. Cl. 177, 259 (1994) (“In cases of
(continued...)”)

apportionment” of the delay attributable to each party has been established. *E.g.*, *T. Brown Constructors, Inc. v. Peña*, 132 F.3d 724, 734 (Fed. Cir. 1997) (quoting *Coath & Goss, Inc. v. United States*, 101 Ct. Cl. 702, 715 (1944)). Because the equitable adjustment claim for compensable delay is the contractor’s claim, the burden is on the contractor to apportion the delay between the parties. *E.g.*, *William F. Klingensmith, Inc. v. United States*, 731 F.2d 805, 809 (Fed. Cir. 1984). “Generally, courts will deny recovery where the delays are ‘concurrent or intertwined’ and the contractor has not met its burden of separating its delays from those chargeable to the Government.” *Blinderman Constr. Co. v. United States*, 695 F.2d 552, 559 (Fed. Cir. 1982).

f. *The contractor must prove the extent of the government-caused delay, and its increased costs, to prove its injury*

To prove the “resultant injury” to the contractor from government-caused unreasonable delay, *Servidone*, 931 F.2d at 861, the contractor must prove the extent of the delay attributable to the government, *see Wilner*, 24 F.3d at 1401 (stating that “the contractor has the burden of proving the extent of the delay”), and that the delay caused the contractor to incur additional costs, *see Johnson & Sons*, 180 Ct. Cl. at 986 (identifying compensable delay as “causing additional expense or loss to a contractor”); *see also Wilner*, 24 F.3d at 1401 (stating that the contractor must prove “that the delay harmed the contractor”). There are two types of additional costs alleged in Sollitt’s delay-based claims here: additional costs related to the expense of performing certain contract work in winter (Count IV) and additional costs caused by the delayed completion of the project past a projected completion date (Counts I and II).

g. *The increased costs of winter construction may be compensable*

Construction during winter months may be more expensive than the same work performed during temperate weather. The Court of Claims commented that some winter construction “necessarily entail[s] considerable unusual expense.” *Owen v. United States*, 44 Ct. Cl. 440, 445 (1909). This court and its predecessor courts have sometimes found compensable delays where government-caused unreasonable delays pushed construction activities into the winter months, when these activities were originally scheduled for a different time of year. *See, e.g., J.D. Hedin Constr. Co. v. United States*, 347 F.2d 235, 256 (Ct. Cl. 1965) (awarding monies for “additional temporary heating during the

⁸(...continued)

concurrent delay, where both parties contributed significantly to the delay period by separate and distinct actions, justice requires that the cost of the delay be allocated between the two parties proportionally.”). A concurrent delay is also independently sufficient to cause the delay days attributed to that source of delay. *See Beauchamp Constr. Co. v. United States*, 14 Ct. Cl. 430, 437 (1988) (noting that a concurrent action “would have independently generated the delay during the same time period even if it does not predominate over the government’s action as the cause of the delay” (citations omitted)).

construction in the winters”); *Owen*, 44 Ct. Cl. at 445-46 (awarding monies to compensate for the “considerable loss” incurred due to winter work); *Youngdale & Sons Constr. Co. v. United States*, 27 Fed. Cl. 516, 547, 557 (1993) (awarding monies for the labor inefficiencies of winter weather work); *Am. Line Builders, Inc. v. United States*, 26 Cl. Ct. 1155, 1211-12 (1992) (awarding monies for the additional costs for winter work). The court may deny an equitable adjustment, however, if the contractor fails to prove that, but for the government delay, the contract work would have been completed before the onset of the winter weather. See, e.g., *Kit-San-Azusa, J.V. v. United States*, 32 Fed. Cl. 647, 656 (1995) (denying recovery for this reason, among others).

h. *The increased costs of winter work may be apportioned for concurrent delays*

Apportionment of additional costs encountered by working in the winter months, when there have been concurrent delays caused by the government and the contractor, is appropriate, and may be achieved by awarding a proportion of winter-related costs based on a mathematical formula derived from the amount of delay attributable to each party. The Court of Claims applied such a formula in *Luria Bros. & Co. v. United States*, 177 Ct. Cl. 676 (1966):

Since there was an overrun on the contract performance time of 518 days, of which 420 days have been found to be chargeable to the defendant as unreasonable, some proration of the cost to the plaintiff of such delay is indicated. Accordingly, 81 percent of the plaintiff’s cost of delay is chargeable to the defendant.

Id. at 740. In that case, the contractor was awarded monies for “protection” of exterior masonry done in the winter, including “salt, hay, tarpaulins, salamanders and labor.” *Id.* at 741. The court applied an eighty-one percent proration to all of the contractor’s delay-related costs, including winter protection of exterior masonry and loss of labor productivity when performing winter work. *Id.* at 744-46. A few years later, the Court of Claims again contemplated an apportionment of winter construction costs, when it remanded a case to a contract appeals panel to determine “whether any part of the delay in enclosing the building was due to the fault of the Government, and if so, how much [of the additional costs for winter labor] is compensable under the Suspension of Work clause.” *Chaney & James Constr. Co. v. United States*, 421 F.2d 728, 739 (Ct. Cl. 1970). Thus, in the case of concurrent delays that push construction work into the winter months, the contractor may receive an equitable adjustment for the increased costs of winter work, if the delays can be apportioned on the record before the court.

i. *When establishing the extent of government-caused delay to project completion, the contractor bears the burden of proving critical path delays*

In order to prevail on its claims for the additional costs incurred because of the late completion of a fixed-price government construction contract, “the contractor must show that the government’s actions affected activities on the critical path^{9/} of the contractor’s performance of the contract.” *Kinetic Builder’s Inc. v. Peters*, 226 F.3d 1307, 1317 (Fed. Cir. 2000) (citing *Essex Electro*, 224 F.3d at 1295-96 and *Sauer Inc. v. Danzig*, 224 F.3d 1340, 1345-46 (Fed. Cir. 2000)). “The reason that the determination of the critical path is crucial to the calculation of delay damages is that only construction work on the critical path had an impact upon the time in which the project was completed.” *Wilner*, 24 F.3d at 1399 n.5 (quoting *G.M. Shupe, Inc. v. United States*, 5 Cl. Ct. 662, 728 (1984)). “One established way to document delay is through the use of Critical Path Method (CPM) schedules and an analysis of the effects, if any, of government-caused events upon the critical path of the project.” *PCL Constr. Servs., Inc. v. United States*, 47 Fed. Cl. 745, 801 (2000).

A government delay which affects only those activities not on the critical path does not delay the completion of the project. As the Claims Court stated in *G.M. Shupe*:

If work on the critical path was delayed, then the eventual completion date of the project was delayed. Delay involving work not on the critical path generally had no impact on the eventual completion date of the project.

5 Cl. Ct. at 728. It is the contractor’s burden to establish the critical path of the project in order to justify an equitable adjustment based on an extension of the completion date of the project. See *CEMS, Inc.*, 59 Fed. Cl. at 233 (denying recovery because the plaintiff had not met this burden). In *PCL*, this court denied recovery for government-caused delay because the contractor “never provided

^{9/} The United States Court of Claims offered this definition of “critical path”:

Essentially, the critical path method is an efficient way of organizing and scheduling a complex project which consists of numerous interrelated separate small projects. Each subproject is identified and classified as to the duration and precedence of the work. . . . The data is then analyzed, usually by computer, to determine the most efficient schedule for the entire project. Many subprojects may be performed at any time within a given period without any effect on the completion of the entire project. However, some items of work are given no leeway and must be performed on schedule; otherwise, the entire project will be delayed. These latter items of work are on the “critical path.” A delay, or acceleration, of work along the critical path will affect the entire project.

Haney v. United States, 676 F.2d 584, 595 (Ct. Cl. 1982).

[the government] or this court with a critical path analysis of the alleged government-caused hindrance and its effect upon the critical path of this project” and concluded that the contractor “did not demonstrate that its project delay was caused exclusively or even predominantly by the government.” 47 Fed. Cl. at 802, 804. “[W]hen the contract utilizes CPM scheduling, the contractor must prove that the critical path of work was prolonged in order to prove a delay in project completion.” *Hoffman Constr. Co. of Or. v. United States*, 40 Fed. Cl. 184, 197-98 (1998), *aff’d in part, rev’d in part on other grounds*, 178 F.3d 1313 (Fed. Cir. 1999).

j. *Because the critical path changes over time, critical path schedule updates are needed to analyze delays*

The critical path of construction activities may change as a project is actually built, and “activities that were not on the original critical path subsequently may be added.” *Sterling Millwrights, Inc. v. United States*, 26 Cl. Ct. 49, 75 (1992). Accurate CPM schedule updates are required during the course of construction to reflect delays and shifts in the critical path. “[I]f the CPM is to be used to evaluate delay on the project, it must be kept current and must reflect delays as they occur.” *Fortec Constructors v. United States*, 8 Cl. Ct. 490, 505 (1985), *aff’d*, 804 F.2d 141 (Fed. Cir. 1986). Accurate CPM schedule updates produced during actual construction are better evidence of the critical path than the baseline CPM schedule provided at the beginning of the project. As this court acknowledged in *Blinderman Constr. Co. v. United States*, 39 Fed. Cl. 529 (1997), “accurate, informed assessments of the effect of delays upon critical path activities are possible only if up-to-date CPM schedules are faithfully maintained throughout the course of construction.” *Id.* at 585.

k. *The contractor bears the burden of apportioning concurrent critical path delays*

If the evidence shows that the contractor, along with the government, caused concurrent delay to the critical path of a project, the contractor must apportion the delays affecting the completion of the project to be able to recover delay damages. *Blinderman*, 695 F.2d at 559; *Avedon Corp. v. United States*, 15 Cl. Ct. 648, 653 (1988). “Courts will deny recovery where the delays are concurrent and the contractor has not established its delay apart from that attributable to the government.” *Klingensmith*, 731 F.2d at 809. Because concurrent delays which do not affect the critical path of contract work do not delay project completion, an accurate critical path analysis is essential to the determination of whether concurrent delays have caused delay damages related to the delayed completion of a complex construction project. If government-caused delays “did not interfere with the project’s critical path,” no costs related to delayed completion of the project are owed to the contractor. *Kelso v. Kirk Bros. Mech. Contractors, Inc.*, 16 F.3d 1173, 1177 (Fed. Cir. 1994). To recover for the delayed completion of the project, “[n]ot only must plaintiff disentangle its delays from those allegedly caused by the government, but the delays must have affected activities on the critical path.” *Mega Constr. Co. v. United States*, 29 Fed. Cl. 396, 424 (1993) (citation omitted).

- i.** *One type of injury to the contractor from government-caused delays to the completion of a project is that of wage increases which would not have occurred during the planned time of performance*

There are two types of alleged additional costs caused by the delayed completion of this project past its original completion date. In Count II, the additional costs claimed by Sollitt due to the delayed completion of the project are labor costs which escalated after the projected completion date of the project. This type of additional expense may sometimes be recovered as delay damages. In *Luria Bros.*, the Court of Claims awarded a proportion of the wage increases paid by the contractor after the projected completion date of the project. 177 Ct. Cl. at 743, 746. Similarly, in *J.D. Hedin*, the Court of Claims held that a contractor could recover delay damages, because, “[a]s a result of the government-caused delays heretofore described, the project was shifted into a period of higher wages for laborers.” 347 F.2d at 256. The contractor must prove the extent of the delay, *Wilner*, 24 F.3d at 1401, and the amount of the harm caused by that delay, *Servidone*, 931 F.2d at 861, to recover on its equitable adjustment claim for increased labor costs.

- m.** *The contractor must prove the amount of home office and field office overhead that is related to the government-caused delay of project completion*

In Count I, Sollitt claims extended home office and field office overhead related to the delayed completion of Phases II and III of the project. Extended home office overhead costs are a type of delay damages that may sometimes be recovered. As the Federal Circuit stated in *West v. All State Boiler, Inc.*, 146 F.3d 1368 (Fed. Cir. 1998) (*All State Boiler*):

Where the government suspends performance of a contract, the contractor’s indirect costs, such as home office [overhead], often accrue beyond the amount originally allocated to that particular contract. These additional indirect costs may thus be “unabsorbed.” The Court of Claims consistently allowed a contractor to recover not only additional direct costs that accrue to a contract where completion of performance is delayed by the government, but also any *unabsorbed*, indirect costs that result.

Id. at 1372 (citing *Fred R. Comb Co. v. United States*, 103 Ct. Cl. 174, 184 (1945)). Extended field office overhead also may sometimes be recovered as delay damages. In *Luria Bros.*, for

example, the Court of Claims awarded a proportion of the field supervision costs incurred by the contractor after the projected completion date of the project. 177 Ct. Cl. at 741, 746.

- n. *When the parties stipulate to the daily costs of home office and field office overhead, the contractor must prove the extent of the government-caused delay but is relieved of some other elements of proof of its increased costs*

When the daily costs of field office and home office overhead have been stipulated,¹⁰ as is the

^{10/} Such a stipulation establishes the daily cost of unabsorbed home office overhead costs allocated to the project in question, a figure normally calculated by using what is known as the Eichleay formula. “The Eichleay formula is used to calculate the amount of unabsorbed home office overhead a contractor can recover when the government suspends or delays work on a contract for an indefinite period.” *P.J. Dick*, 324 F.3d at 1370 (citing *Melka Marine, Inc. v. United States*, 187 F.3d 1370, 1375 (Fed. Cir.1999) (citing *Eichleay Corp.*, ASBCA No. 5183, 60-2 B.C.A. (CCH) ¶ 2688 (July 29, 1960))). This sort of stipulation also obviates, when it is accompanied by proof of entitlement to delay damages under the Suspension of Work clause, the requirement for “separate proof of entitlement to Eichleay damages [for unabsorbed home office overhead],” if the stipulation predicates stipulated damages solely on liability under the Suspension of Work clause. *Id.* at 1374-75. Although the stipulation at issue here, SE 2007 at 1, does not specify which type of entitlement would trigger the stipulated daily rates for extended home office overhead, the court will treat the stipulation as having predicated recovery solely on liability under the Suspension of Work clause, because in this case the result would be the same under either Eichleay entitlement or stipulated Suspension of Work entitlement. The “separate proof” normally required to establish Eichleay entitlement for extended home office overhead is a showing that the contractor was on standby, and may also require a showing that the contractor was unable to take on other work. *P.J. Dick*, 324 F.3d at 1374-75. These “separate proof” issues have not been addressed by the parties.

An extended field office overhead claim, which requests damages for costs that are increased due to maintaining a presence at the construction site for a longer period than originally anticipated in the bid, requires different proof than a claim for unabsorbed home office overhead calculated using the Eichleay formula. As this court noted in *Blinderman*, 39 Fed. Cl. at 587 n.56 (citing *Wickham Contracting Co. v. Fischer*, 12 F.3d 1574, 1575, 1581 (Fed. Cir. 1994)), home office overhead is an indirect cost whereas field office overhead is a direct cost. A plaintiff must prove government liability under the Suspension of Work clause for delay to project completion, and also must prove the extent of its increased field office overhead costs. “[F]ield office overhead costs . . . , like other direct costs, require specific proof of proximate causation (as well as the quantum of damages).” *Id.* (citing *Wickham*, 12 F.3d at 1581)). Here, liability is contested and the extent of any government-caused delay is disputed, but the daily costs of field office overhead have been established by the stipulation of

(continued...)

case here, SE 2007 at 1, the award of extended overhead costs may be derived from the sum of the proven government-caused unreasonable delays which slowed the completion of the project. In *All State Boiler*, the Federal Circuit affirmed a VABCA decision that awarded delay damages derived from a finding of twenty-two days of government-caused delay and an auditor's figure of a home office overhead daily rate of \$718. 146 F.3d at 1371, 1382. The daily home office overhead costs were simply multiplied by the number of delay days which were chargeable to the government. *Id.* In cases of concurrent delay to the critical path, the calculation would also include apportionment of the delays to arrive at a percentage of extended overhead costs for which the government would be liable. *Luria Bros.*, 177 Ct. Cl. at 740, 746.¹¹

- o. *When multiple delays by one party are concurrent with each other, that party's delays must be analyzed to ensure that the overall effect of these multiple delays is correctly attributed to that party*

One final complication with concurrent delays is the inquiry into whether one party's multiple delays are concurrent with each other in addition to being concurrent with the other party's delays. By necessarily focusing only on critical path activities that are delayed, the court makes this inquiry somewhat simpler. Among all critical path delays, the court first examines the proven delays caused by only one party to make sure that the delay days which are concurrent with each other are not counted more than once. As the Federal Circuit explained in *Essex Electro*, the "overall effect" of one party's delays must be measured against the overall delay caused by the other party and that this is done by correctly accounting for each party's delays which "might have been concurrent with each other." 224 F.3d at 1296. Then, the court apportions the overall critical path concurrent delays from each party to determine the contractor's entitlement to an equitable adjustment. The Federal Circuit decided that this approach of comparing one party's overall delays with the other party's overall delays is more reliable than checking each delay from one party against a possible concurrent delay from the other party for a series of subtotal periods of entitlement. *Id.* To assist in the complex analysis, when multiple delays by one party are alleged to have impacted the critical path, accurate and updated CPM (critical path method) schedules are essential tools in the court's concurrent delay analysis. As this court stated in *Blinderman*, "the only way to accurately assess the effect of the delays alleged . . . on the . . . project's progress is to contrast updated CPM schedules prepared *immediately* before and *immediately* after each purported delay." 39 Fed. Cl. at 585.

¹⁰(...continued)
the parties, SE 2007 at 1.

¹¹/ Another reasonable formula, when the government has caused more delay days to the critical path activities than the contractor, would be to subtract the contractor-caused delays from the government-caused unreasonable delays and to multiply the resultant figure by the stipulated overhead daily cost.

2. Excusable Delay

- a. *The government has the initial burden of showing late completion, and the contractor then has the burden to show that the delay was excusable*

In the context of litigating liquidated damages assessed by the government in a construction contract, the government first must meet its initial burden of showing that “the contract performance requirements were not substantially completed by the contract completion date and that the period for which the assessment was made was proper.” *PCL Constr. Servs., Inc. v. United States*, 53 Fed. Cl. 479, 484 (2002) (internal quotation and citation omitted), *aff’d*, 96 Fed. Appx. 672 (Fed. Cir. 2004). Once the government has met that burden, the burden then shifts to the contractor “to show that any delays were excusable and that it should be relieved of all or part of the assessment.” *Id.* (internal quotation and citation omitted). One type of excusable delay occurs when the government has delayed the project work, forcing the contractor to miss the contract completion deadline. “[W]here a contractor is prevented from executing his contract according to its terms, he is relieved from the obligations of the contract [as to the time of completion] and from paying liquidated damages.” *Schmoll v. United States*, 91 Ct. Cl. 1, 28 (1940) (quoting *Levering & Garrigues Co. v. United States*, 73 Ct. Cl. 566, 578 (1932)). When the alleged excuse for the delay is action or inaction by the government, there is some controversy as to whether any government delay to contract completion, if proved, completely voids a contract’s liquidated damages provision, or whether apportionment of liquidated damages is possible where there has been concurrent delay by both parties. *Compare R.P. Wallace, Inc. v. United States*, 63 Fed. Cl. 402, 413 (2004) (stating that the apportionment of liquidated damages is permissible) *with PCL*, 53 Fed. Cl. at 486 (stating that “[t]he status of the rule against apportionment [of liquidated damages when the government has contributed to the delay of contract performance] in the . . . Federal Circuit is unsettled”).

- b. *When the government has caused part of the delay to project completion, liquidated damages are either waived or the liquidated damages may be apportioned*

The rule against apportionment of liquidated damages when the government has contributed to the delay in contract completion was clearly stated in *United States v. United Eng’g & Constructing Co.*, 234 U.S. 236 (1914):

We think the better rule is that when the contractor has agreed to do a piece of work within a given time, and the parties have stipulated fixed sum as liquidated damages, not wholly disproportionate to the loss for each day’s delay, in order to enforce such payment the other party must not prevent performance of the contract within the stipulated time; and that where such is the case, and thereafter the work is completed,

though delayed by the fault of the contractor, the rule of the original contract cannot be insisted upon, and liquidated damages measured thereby are waived.

Id. at 242. The Court of Claims employed the rule against apportionment of liquidated damages in *Acme Process Equip. Co. v. United States*, 347 F.2d 509 (Ct. Cl. 1965), *rev'd on other grounds*, 385 U.S. 138 (1966). In that case, the Court of Claims held that “the defendant merely loses its right to insist on an artificial measure of damages agreed on by the parties for the situation in which the contractor alone is responsible for the delay,” because a “plaintiff is entitled to recover on its claim for remission of liquidated damages [when] the delays on which the assessment was based were caused by the Government as well as by [the plaintiff]”). *Id.* at 534. The rule against apportionment has been extensively followed by this court’s predecessors (the United States Court of Claims and the United States Claims Court) and some boards of contract appeals, *see PCL*, 53 Fed. Cl. at 485 (listing cases), but the rule has been criticized and ignored in other cases, *see, e.g., R.P. Wallace*, 63 Fed. Cl. at 410-13; *see also PCL*, 53 Fed. Cl. at 485-86 (listing cases).

The rule against apportionment of liquidated damages appears to have been ignored in many recent boards of contract appeals decisions. *See, e.g., William F. Klingensmith, Inc.*, ASBCA No. 52028, 03-1 B.C.A. (CCH) ¶ 32,072 (Nov. 15, 2002); *Karcher Envtl., Inc.*, PSBCA Nos. 4085, 4093, 4282, 02-1 B.C.A. (CCH) ¶ 31,787 (Feb. 21, 2002). The Federal Circuit did not apply the rule against apportionment of liquidated damages in a recent decision, but did not comment on its nonobservance of the rule. *Sauer*, 224 F.3d at 1347. In *Sauer*, the Federal Circuit upheld an ASBCA decision which remitted only a portion of the assessed liquidated damages when both the contractor and the government delayed contract work completion. *Id.* Thus, the *Sauer* court approved of an apportionment of liquidated damages. *Id.* This court has also apportioned liquidated damages where concurrent government and contractor delays affected contract completion, without commenting on the rule against apportionment. *See Neal & Co. v. United States*, 36 Fed. Cl. 600, 647, 649 (1996) (referring to “over-withheld liquidated damages” and returning only a portion of these).

Recently, this court, in a thorough analysis of the possibility of apportioning liquidated damages when the government has contributed to the delay of contract completion, followed *Sauer* and cited a number of decisions applying the rule from *Robinson v. United States*, 261 U.S. 486 (1923), which allowed the apportionment of liquidated damages. *R.P. Wallace*, 63 Fed. Cl. at 410-13. In light of the extensive discussions in *PCL* and *R.P. Wallace* of the rule against apportionment and the conflicting rule allowing apportionment of liquidated damages, and in the absence of a precedential decision resolving the apparent conflict between these two analyses of controlling precedent on this issue, the court here will examine the facts of this case under both the rule that forbids apportionment and the rule that permits apportionment of liquidated damages. Because the result in this case happens to be the same under either rule, the court here does not need to further address the status of the rule against apportionment of liquidated damages in this circuit.

3. Proof of Equitable Adjustment Claims

a. *Liability and damages are reviewed de novo*

When prosecuting an equitable adjustment claim in this court, a “contractor has the burden of proving the fundamental facts of liability and damages de novo.” *Wilner*, 24 F.3d at 1401 (citing *Servidone*, 931 F.2d at 861). Under the Changes clause of this fixed-price construction contract, 48 C.F.R. § 52.243-4(d) (1994), the government is liable when changes to contract work increased the contractor’s costs:

If any change under this clause causes an increase or decrease in the Contractor’s cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any [change] order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing.

Id. Because the court’s determination of the government’s liability under the Changes clause is de novo under the Contracts Disputes Act, 41 U.S.C. §§ 605(a), 609(a)(3) (2000), final liability decisions by the contracting officer are not accorded a rebuttable presumption of validity. *England v. Sherman R. Smoot Corp.*, 388 F.3d 844, 854 (2004) (*Smoot*). In *Smoot*, the Federal Circuit also announced that it “see[s] no basis for drawing a distinction between an interim and a final decision of a contracting officer,” because “Congress made it clear in the CDA that any findings of fact by a contracting officer are not binding in any subsequent proceeding.” *Id.* Thus, the Federal Circuit interprets the CDA as removing any rebuttable presumption of validity for either interim or final liability decisions by the contracting officer. *Id.* The court will consider the contracting officer’s findings of liability as some evidence of a contemporaneous consideration of liability, but will give these interim or final decisions no deference.

b. *The contractor must prove that its actual incurred costs for the changed work were reasonable*

Once the contractor has proved the government’s liability for the costs of added or changed contract work, the actual costs incurred by the contractor will provide the measure of the equitable adjustment to the contract price, if those incurred costs are reasonable. *Bruce Constr. Corp. v. United States*, 324 F.2d 516, 518-19 (Ct. Cl. 1963) (*Bruce Construction*). Although a contractor’s incurred costs were once considered to have a presumption of reasonableness when determining the amount of an equitable adjustment, *Bruce Construction*, 324 F.2d at 519, this presumption has been eroded by a 1987 amendment to FAR 31.201-3, codified at 48 C.F.R. § 31.201-3(a) (2004). This regulation states that “[n]o presumption of reasonableness shall be attached to the incurrence of costs by a contractor.” *Id.* The effect of the revisions to FAR 31.201-3 on the presumption of reasonableness established by *Bruce Construction* has been recognized by many authorities. *See*,

e.g., Morrison Knudsen Corp. v. Fireman's Fund Ins. Co., 175 F.3d 1221, 1244 n.30 (10th Cir. 1999) (listing cases). Some authorities go as far as to say that “[since] the revision of FAR 31.201-3 on July 30, 1987, no presumption of reasonableness is attached to the incurrence of costs by a contractor” *Herman B. Taylor Constr. Co.*, GSBICA No. 12915, 96-2 B.C.A. (CCH) ¶ 28,547 (Aug. 27, 1996) (citation omitted); *see also* 6 Philip L. Bruner & Patrick J. O’Connor, *Bruner & O’Connor on Construction Law* § 19:50, at 186 n.4 (2002) (stating that the presumption of reasonableness established by *Bruce Construction* “has been negated by” FAR 31.201-3).

This court, however, has not entirely discarded the presumption of reasonableness established by *Bruce Construction*. In *R.P. Richards Constr. Co. v. United States*, 51 Fed. Cl. 116 (2001), for example, this court asserted that “there is a presumption that [the contractor’s] actual costs paid are reasonable.” *Id.* at 125 (citing *N. Slope Technical Ltd. v. United States*, 14 Cl. Ct. 242, 264-65 (1988)). Yet, only a year earlier, this court applied the reasonableness test of FAR 31.201-3, rather than the *Bruce Construction* presumption, when the FAR provision was applicable to the contract at issue. *Info. Sys. & Networks Corp. v. United States*, 48 Fed. Cl. 265 (2000) (*Information Systems*). The court in *Information Systems* noted that the proper test for reasonableness was found in FAR 31.201-3, because “FAR Part 31, Contract Cost Principles and Procedures, Subpart 31.2, Contracts With Commercial Organizations, establishes a set of principles and provisions for the reimbursement of costs for contractors performing the type of contract at issue in this case.” *Id.* at 268. Thus, in this court, a reasonable reading of the caselaw is that no presumption of reasonableness applies if FAR 31.201-3 governs the contract at issue, but the *Bruce Construction* presumption of reasonableness would apply to the contractor’s incurred costs for changed or added work if FAR 31.201-3 were not applicable.

Department of Defense contracts have for some time incorporated the Contract Cost Principles by reference, including the reasonableness test of FAR 31.201-3, through the language of DFARS 252.243-7001, codified at 48 C.F.R. § 252.243-7001 (2004). John Cibinic, Jr. & Ralph C. Nash, Jr., *Administration of Government Contracts* 686 (3d edition 1995). It is undisputed that the contract in this case included DFARS 252.243-7001 (1994). Def.’s Mem. at 5. Therefore, FAR 31.201-3 provides the standard of reasonableness for Sollitt’s costs incurred due to added or changed contract work, and no presumption of reasonableness applies:

Determining reasonableness.

(a) A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive business. Reasonableness of specific costs must be examined with particular care in connection with firms or their separate divisions that may not be subject to effective competitive restraints. No presumption of reasonableness shall be attached to the incurrence of costs by a contractor. If an initial review of the facts results in a

challenge of a specific cost by the contracting officer or the contracting officer's representative, the burden of proof shall be upon the contractor to establish that such cost is reasonable.

(b) What is reasonable depends upon a variety of considerations and circumstances, including--

(1) Whether it is the type of cost generally recognized as ordinary and necessary for the conduct of the contractor's business or the contract performance;

(2) Generally accepted sound business practices, arm's length bargaining, and Federal and State laws and regulations;

(3) The contractor's responsibilities to the Government, other customers, the owners of the business, employees, and the public at large; and

(4) Any significant deviations from the contractor's established practices.

48 C.F.R. § 31.201-3 (1994). For the purposes of determining the amount of equitable adjustment damages due Sollitt for changes to contract work, this contract provision clearly places the burden of proving the reasonableness of incurred costs on Sollitt, once those costs have been challenged by the government. *Id.*

c. *The government bears the burden of proving the cost of deleted contract work*

However, when the government has deleted work and/or costs from a fixed-price construction contract, the government, not the contractor, bears the burden of proving the amount of any downward equitable adjustment to the contract price:

[T]he Government has the burden of proving how much of a downward equitable adjustment in price should be made on account of the deletion of [certain specified materials]. Just as the contractor has that task when an upward adjustment is sought under the Changes clause, so the defendant has the laboring oar, and bears the risk of failure of proof, when a decrease is at issue.

Nager Elec. Co. v. United States, 442 F.2d 936, 946 (Ct. Cl. 1971). Both parties must prove their equitable adjustment claims by a preponderance of the evidence. *Teledyne McCormick-Selph v. United States*, 588 F.2d 808, 810 (Ct. Cl. 1978).

4. Government Discretion Regarding Performance Awards on Public Contracts

a. *This court has jurisdiction over disputes concerning performance awards*

Government contracts in the mid-1990s included language attempting to “[e]xpressly exclude[] from the operation of the Disputes clause any disagreement by the contractor concerning the amount of the [performance] award fee,” *e.g.*, 48 C.F.R. § 16.405(e)(3) (1994), and thus purported to exempt government decisions regarding performance awards from the Contract Disputes Act. These clauses, insofar as they were intended to defeat jurisdiction in the Court of Federal Claims or before boards of contract appeals over disputes concerning performance awards, were voided by the Federal Circuit in *Burnside-Ott Aviation Training Ctr. v. Dalton*, 107 F.3d 854 (Fed. Cir. 1997). The Federal Circuit voided the “jurisdiction defeating mechanism” of these clauses because “the CDA trumps a contract provision inserted by the parties that purports to divest the Board of jurisdiction” over performance award disputes. *Id.* at 858-59. Thus, this court does have jurisdiction over disputes concerning performance awards, notwithstanding any contract language to the contrary. *Cf. Westinghouse Hanford Co. v. United States*, 47 Fed. Cl. 665, 666, 667 n.1 (2000) (citing *Burnside-Ott* and voiding a jurisdiction defeating provision concerning disputes over “incentive fee[s]”). However, the scope of this court’s review of performance award decisions is a more nuanced issue.

b. *If unilateral discretion is granted to the government, performance award decisions are reviewed for arbitrary or capricious abuse of that discretion*

In *Burnside-Ott*, the Federal Circuit reviewed a clause concerning performance awards which stated: “‘The Award Fee decision is a unilateral determination made by the [Fee Determining Official or FDO] and is not subject to the “DISPUTES” Clause of the contract.’” 107 F.3d at 858 (quoting the contract at issue). The *Burnside-Ott* court held that the term “granting unilateral discretion to the FDO” was valid, but that the jurisdictional bar was void. *Id.* at 858. The Department of Defense recognized the distinction made by the *Burnside-Ott* decision, and revised contracting regulations accordingly. Review of Award Fee Determinations (*Burnside-Ott*), 64 Fed. Reg. 72,448 (Dec. 27, 1999). The regulatory change “amend[ed] FAR 16.405-2(a) by deleting the statement that [the] award-fee determinations are not subject to the disputes clause of the contract and inserting a statement that such determinations and the methodology for determining award fee are unilateral decisions made solely at the discretion of the Government”). The current version¹² of this regulation states:

The amount of the award fee to be paid is determined by the

^{12/} In 1995, however, these revisions had not yet been made. Therefore, this court must apply the holding of *Burnside-Ott* to the specific contract language agreed to by the parties in this case to determine the nature of the discretion afforded the Navy by this language. *See infra* Count XVIII.

Government’s judgmental evaluation of the contractor’s performance in terms of the criteria stated in the contract. This determination and the methodology for determining the award fee are unilateral decisions made solely at the discretion of the Government.

48 C.F.R. § 16.405-2(a) (2004). In *Burnside-Ott*, the unilateral discretion afforded the government by the above-cited contract clause limited review of the award to determining whether “the discretion employed in making the decision [wa]s abused, for example, if the decision was arbitrary or capricious.” 107 F.3d at 860.

So, if the contract language supports a finding that unilateral discretion has been granted to the government to determine the amount of a performance award, this court is limited to reviewing whether the government’s award decision was arbitrary or capricious. The *Burnside-Ott* holding was applied in a decision of this court concerning another type of discretionary fee awarded by the government to contractors – Value Engineering Change Proposals, or VECPs – where a contractor may receive awards for cost saving proposals. *RCS Enters., Inc. v. United States*, 53 Fed. Cl. 303, 309 (2002) (*RCS II*) (stating that this court did have jurisdiction to hear disputes over VECPs); *RCS Enters., Inc. v. United States*, 46 Fed. Cl. 509, 515-18 (2000) (*RCS I*) (discussing the implications of *Burnside-Ott* for this court’s review of VECF refusals by the government). In *RCS II*, this court held that, in a dispute over the government’s refusal to pay for a VECF, “the court could review the contracting officer’s decision to determine whether it was contrary to law or an abuse of discretion.” 53 Fed. Cl. at 309. Although the merits of the discretionary decision to accept a VECF were beyond review, this court and boards of contract appeals “have power to consider whether the agency acted illegally or followed improper procedures.” *Id.* (quoting *NI Indus., Inc. v. United States*, 841 F.2d 1104, 1106 n.1 (Fed. Cir. 1988)). The scope of this court’s review of performance award determinations is similar – testing for arbitrariness and capriciousness as measured by law and the procedures set out in the contract. This was the review described in *Burnside-Ott*, where the Federal Circuit found no conflict between the government’s method of determining the award fee in that case and “any part of the contract,” and held that the government did not act “arbitrarily or capriciously.” 107 F.3d at 860.

5. Applicability of Prompt Payment Act Interest

The Prompt Payment Act, 31 U.S.C. §§ 3901-3907 (2000), provides an interest penalty to businesses for “delivered item[s] of property or service [not paid for by the federal government] by the required payment date.” *Id.* § 3902(a). However, when a payment amount is disputed, contractors are limited to the interest offered by the Contract Disputes Act, 41 U.S.C. §§ 601-613 (2000):

Relationship to other laws

....

(c) Except as provided in section 3904 of this title, this chapter does not require an interest penalty on a payment that is not made because of

a dispute between the head of an agency and a business concern over the amount of payment or compliance with the contract. A claim related to the dispute, and interest payable for the period during which the dispute is being resolved, is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601 et seq.).

31 U.S.C. § 3907. Thus, the interest penalty provided by the Prompt Payment Act is not available to a contractor for payments for which the government has disputed its liability. *E.g., Gutz v. United States*, 45 Fed. Cl. 291, 298 (1999).

DISCUSSION OF EACH COUNT

I. **Count I: Delay-related extended overhead costs and liquidated damages**

Before addressing the specific allegations in Count I, the court must address the overall state of the evidence which was presented in support of the delay claims in this case. Sollitt was required by the contract to deliver a baseline construction schedule to the Navy fifteen days after the award date, and to provide monthly updates to that schedule throughout the duration of the project. *See* SE 2017 ¶¶ 1.3, 1.5 (Contract Specification Section 01310 including CPM schedule requirements); JE 10 (FAR 52.236-15 construction schedule requirement); GE 1015 at 4 ¶ 6 (March 24, 1996 Pre-Construction Meeting minutes discussing the CPM schedule submission requirements); Tr. at 2405-08 (Lt. Odorizzi) (confirming that CPM schedules, both baseline and updated, were required by the contract). Phase I construction had the earlier completion date, February 7, 1996, and had one critical path of activities; Phases II and III shared the same, later completion date, May 31, 1996, and formed a second critical path of activities. Agreed Facts ¶ 15; Sollitt Br. at 15. Thus, there were two sets of CPM baseline schedules to be updated monthly. *See* Tr. at 405 (Mr. Strong) (stating that “there [we]re two separate schedules for those jobs [Building 122 and Building 2B]”). Sollitt was late in providing the two baseline CPM schedules which were due in mid-March 1995, Tr. at 405 (Mr. Strong) (estimating that the CPM baseline schedule for Phase I was submitted in June 1995 and that the CPM baseline schedule for Phases II and III was submitted in July 1995), and for some months at the beginning and end of the project Sollitt never provided monthly CPM schedule updates, Agreed Facts ¶¶ 24-25 (stating that Phase I CPM schedule updates were provided July 1995 through March 1996, inclusive, and that Phases II and III CPM schedule updates were provided for August 1995 through June 1996, inclusive). The absence of CPM schedule updates for the start-up and completion phases of the project necessarily makes the proof of delay damages more difficult. *See* Tr. at 2274-76 (Mr. Tipton) (acknowledging that the normal analysis of delay involves a review of CPM updates at the end of the project, which permits a measurement of the actual delay experienced by the impacted activities at the end of the critical path).

Even the CPM schedule updates that are in the record are not always useful. Some of the CPM schedule updates lack specific information about the start and end dates of certain work activities

on the critical path, because these activities were reported only as to their percentage of completion. Tr. at 2061-62 (Mr. Tipton). This is not standard industry practice, *id.*, and makes the determination of amount of delay attributable to a particular event difficult, *see* Tr. at 1464-67 (Mr. Zielinski) (admitting that it was impossible to derive certain critical path activity dates from his CPM schedule updates). Even when specific critical path activity dates could be gleaned from the CPM schedule updates, these dates were inaccurate in several instances. Tr. at 1467 (Mr. Zielinski), 2314 (Mr. Tipton), 3162 (Mr. Dorn). These problems with the CPM schedule updates added to the difficulty of the delay damages analysis.

Sollitt's expert, Mr. Tipton, relied upon both the baseline CPM schedule and the CPM schedule updates in his estimates of delays caused by the Navy to the critical path¹³ of the project. JE 233 at 14-16, 20-21; JE 235 at 1. Sollitt asks the court to "credit" these analyses, *see* Sollitt Br. at 42 (stating that the court "should give credit to [the] Tipton analyses"), despite data problems the court has noted related to the missing, non-specific or inaccurate CPM schedule updates, because it alleges that the Navy "restrict[ed] . . . Sollitt's ability to accurately update the schedules"), Sollitt Reply at 3. Sollitt expended considerable effort at trial and in its post-trial brief¹⁴ attempting to prove this allegation, but

^{13/} Although it would be more accurate to refer to the critical path for Phase I construction and the critical path for Phases II and III construction, the court abbreviates these as "the critical path of the project" when speaking in general terms about this case.

^{14/} Sollitt relies principally on *Fortec*, 8 Cl. Ct. at 505, for support for its argument that the Navy cannot now benefit from inaccurate CPM schedule updates because the Navy was tardy in granting time extensions and the lack of those time extensions rendered Sollitt's CPM schedule updates inaccurate. *Fortec* held, however, that the Army Corps of Engineers could not rely, in its defense against a claim for an equitable adjustment to extend the completion date of a construction contract, upon the single CPM schedule update provided by the contractor during the course of construction as proof of the critical path, when specific contract provisions prevented the contractor from adding time extensions to that CPM schedule update without Corps approval, and when Corps approval had not been timely given. *Id.* at 507-08. The court noted:

The Government's reliance upon the CPM [schedule] in denying Fortec's claims is clearly misplaced. . . . [N]either party appears to have used the CPM [schedule] in evaluating contract performance. Since Fortec's CPM [schedule] was revised only once during performance [of one year], and then without regard to the effect of prior delay claims on the project not acknowledged by the Corps, its use after the fact as a gauge for measuring time extensions plainly is improper.

(continued...)

the court remains unpersuaded that the Navy, either directly or indirectly, restricted Sollitt's ability to report delays accurately in its monthly CPM updates.

Sollitt first attempted to prove that the Navy forbade Sollitt from reporting delays on its CPM schedule updates until time extensions for those delays had been granted. *See* Sollitt Reply at 3 (stating that Sollitt's preparation of updated CPM schedules "was hampered by the Defendant's refusal to permit Sollitt to include delaying events in the CPM schedules so as to accurately portray the status of the work"). There was no testimony recounting such a communication from the Navy to Sollitt. At most, Sollitt may have been constrained by contract requirements from adding new activities to the CPM schedule updates without authorization from the Navy. *Compare* Tr. at 511 (Mr. Zielinski) ("The monthly updating, which was a contractual obligation, had to deal with just the activities that we had in the original schedule. I wasn't allowed to introduce new activities on my own.") *with* Tr. at 3169 (Mr. Dorn) ("If the [delaying] work or the modification or change order was such that you did not have a preexisting activity, I would add that activity and make the appropriate relationships, hit the Calculate button and look at the [projected] end date. It either moves [extends the completion date of the project] or it doesn't."). But there was ample testimony showing that delays to critical path activities already on the schedule are required to be, and by industry practice are, reported on monthly CPM schedule updates. Tr. at 2070-73 (Mr. Tipton), 2750 (Lt. Odorizzi), 3163-70 (Mr. Dorn). Moreover, Sollitt's expert admitted that it would be "unusual" for the government to forbid the entry of delays into a CPM schedule update, that he had never encountered such a direction, and that a reasonable and prudent contractor would have documented that direction if that direction had been received. Tr. at 2279-80. There was no credible evidence that the Navy forbade Sollitt from

¹⁴(...continued)

Id. Not only is *Fortec* factually distinguishable in that the evidence of governing contract language and testimony concerning the actual use and updating of CPM schedules was different in that case than the evidence before the court here, *id.* at 505-07, but the inaccurate CPM schedule update there was used by the government, not the contractor, to establish the critical path, *id.* Here, the contractor, not the government, is relying on inaccurate CPM schedule updates for its time extension claim, and the equitable concern expressed in *Fortec* does not apply with the same force. Finally, the court notes that *Fortec* does not appear to have addressed the distinction between entering delaying events as opposed to entering time extensions into a CPM schedule update. *See infra* text accompanying note 16. To the extent that *Fortec* might be read to hold that not entering time extensions into a CPM schedule as the delaying events occur renders those CPM schedule updates inaccurate for establishing the critical path of the project, 8 Cl. Ct. at 506, the court notes that *Fortec* is not binding precedent. Further, a more credible reading of *Fortec* is that the combination of missing time extensions *and* missing revisions to the critical path rendered the one CPM schedule update in that case inaccurate. *See id.* at 505 ("The Corps . . . refused to grant timely and adequate time extensions *and* to authorize revisions to the CPM to reflect the changed performance critical path. As a result, it is impossible to determine from the CPM diagram whether a particular activity was critical or noncritical, on schedule or behind schedule.") (emphasis added).

accurately updating its CPM schedules to reflect delays.

Sollitt's remaining argument is that the Navy responded too slowly to its requests for time extensions related to delays chargeable to the Navy, and that it was this dilatory response which rendered the monthly CPM schedule updates inaccurate. *See* Sollitt Br. at 43 (alleging that "[t]he Navy's failure to timely address and acknowledge requests for time extensions made it impossible to prepare accurate CPM updates"). There is a fundamental flaw in the logic of this argument. The granting of a time extension has no effect¹⁵ on the critical path of a project, other than to extend the completion date required by the contract. *See* Tr. at 3227 (Mr. Dorn, when asked whether time extensions affected the critical path: "No. The critical path is the critical path. It's the longest sequence of activities from the beginning to the end."); 3257 (Mr. Dorn, answering a question regarding the effect of time extensions on a contractor's estimated durations for upcoming critical path activities entered into a CPM schedule update: "None [, because these estimates are the contractor's good faith and best estimates of actual durations required by the activities]."); *see also Kora and Williams, Inc.*, DCCAB No. D-839, 1994 WL 750301, n.83 and accompanying text (Mar. 7, 1994) (approving the

^{15/} Of course, time extensions may have an effect on progress payments, which are based on how well a contractor is progressing toward timely completion of the project, as noted in *Weaver-Bailey Contractors, Inc. v. United States*, 19 Cl. Ct. 474 (1990):

[The witness] explained that there is no incentive for a contractor to submit projections reflecting an early completion date. The government bases its progress payments on the amount of work completed each month, relative to the contractor's proposed progress charts. A contractor which submits proposed progress charts using all of the time in the contract, and which demonstrates that work is moving along ahead of schedule, will receive full and timely progress payments. If such a contractor falls behind its *true* intended schedule, *i.e.*, its accelerated schedule, it will still receive full and timely progress payments, so long as it does not fall behind the progress schedule which it submitted to the government.

Id. at 479. Each of Sollitt's two baseline CPM schedules showed a critical path that would be completed on the completion date set by the contract. SE 569; Tr. at 494 (Mr. Zielinski); Def.'s Mem. at 7, 25. Without a timely grant of a time extension, if Sollitt entered a delaying event on its CPM schedule update without the corresponding time extension that was granted later, Sollitt would appear to be further behind on the schedule than it actually was. *See* Tr. at 141 (Mr. Maziarika) (agreeing with plaintiff's counsel's statement that, without the entry of a time extension, the CPM schedule "might show that it was late when it really wasn't"). Although this fact presents a possible motive for not updating CPM schedules accurately to reflect delays until a time extension is granted, it does not justify failing to fulfill the contract requirement of providing updated CPM schedules that were accurate.

contractor's insertion of excusable delay events into its CPM schedule revisions even though the government refused to acknowledge them or grant time extensions). The longest path of interrelated construction activities remains unchanged by a completion date time extension; it makes no difference whether the critical path is extending toward, for example, June 1 or July 1 of the following year. It is far more important to a critical path analysis to enter delays to individual construction activities on the updated CPM schedule than to enter overall time extensions, because these individual delays may have consequences that shift the critical path from one set of activities to another. As the Claims Court noted in *Fortec*, "delay encountered in completion of a noncritical item may make that item critical so that 'every month, conceivably, the critical path would change,'" 8 Cl. Ct. at 505 (quoting testifying witness). When delays are entered into a CPM schedule, even without deserved time extensions, this court can analyze the effect of the delays on the critical path of the project.

Submitting monthly updated CPM schedules was a contract requirement. Sollitt may not excuse its failure to enter delaying events on the CPM schedule updates because of the Navy's alleged failure¹⁶ to grant timely extensions based on those delays. *See supra* note 14. If Sollitt's updated CPM schedules are of limited use in meeting its burden of establishing the critical path of the project, Sollitt is now facing the consequences of its own performance of the contract requirement to provide updated CPM schedules.

Finally, Sollitt offered two delay analyses, which may be characterized as alternative analyses. Sollitt Br. at 44 ("Tipton's alternate analyses provide the Court with reasonable bases for a determination that the Navy-caused delaying events negatively impacted the critical path and to what

^{16/} Although the timeliness of the granting of time extensions by the Navy is not essential to the court's analysis, the court notes that Sollitt sometimes failed to justify its requests for time extensions with adequate and timely documentation. *See* GE 1004 (letter from the Navy to Sollitt stating that the generic phrase, "we hereby request an equitable time extension," without more, found in over a dozen Sollitt change proposals, was not adequate justification for a time extension). When Sollitt provided adequate justification, such as an updated CPM schedule reflecting delays to the critical path, at least in one instance the Navy approved overtime pay as its preferred solution for getting the project back on schedule. *See* Tr. at 508-09 (Mr. Zielinski) (stating that he had done an updated CPM schedule in a face-to-face meeting with the Navy in which he entered "actual amounts of time that we knew as history now" for delaying events, and soon afterward overtime was approved). Sollitt eventually provided more detailed narratives of delays experienced during construction, but not until many months had passed. SE 207 (justification provided for delays encountered on Building 122 from approximately June 1995 through January 1996, submitted on May 1, 1996); SE 260 (justification provided for delays encountered on Building 2B from approximately June 1995 through April 1996, submitted on June 19, 1996). For these reasons, the court finds that Sollitt has not shown that the Navy unreasonably delayed its granting of time extensions to Sollitt. *See* Tr. at 381-83 (Mr. Stahl) (stating that the Navy could not grant time extensions without justification, and that in this contract, updated CPM schedules showing the delaying events would have been the type of justification required).

extent.”). The first analysis estimated delays to the critical path by inserting delaying events into Sollitt’s baseline CPM schedules. JE 233. The second analysis estimated delays to the critical path by inserting delaying events into the CPM schedule updates closest in time to those events. JE 235. Sollitt’s expert stated that he believed that the first analysis was more accurate and preferable, although he also stated that either would be reliable. Tr. at 1815-16. Sollitt asserts that the first analysis is more reliable because the “Navy . . . made it impossible to prepare accurate CPM updates.” Sollitt Br. at 43. The court has however, rejected the argument that the Navy prevented Sollitt from updating its CPM schedules accurately. *See supra*. The court must now decide which of the two analyses, “baseline” or “updated,” is more reliable based on their methodologies and underlying data.

The better methodology for a critical path delay analysis is to use the updated CPM schedules, not the baseline schedule prepared before construction began. *See Blinderman*, 39 Fed. Cl. at 585 (stating that “the only way to accurately assess the effect of the delays alleged . . . on the . . . project’s progress is to contrast updated CPM schedules prepared *immediately* before and *immediately* after each purported delay”); *Fortec*, 8 Cl. Ct. at 505 (stating that “if the CPM is to be used to evaluate delay on the project, it must be kept current and must reflect delays as they occur”); Sollitt Br. at 44 (admitting that Sollitt prepared the updated analysis “in recognition of the widely accepted practice of using the updated schedules for the analys[i]s”); Tr. at 3164 (Mr. Dorn) (stating that the “real danger if you use the baseline [is] that you’re going to achieve the wrong conclusion . . . , in reality the baseline doesn’t reflect the status of the project at that time and where the delay occurred”). Despite the limitations in Sollitt’s updated CPM schedules that the court has noted, there was no evidence presented that indicated that these updated CPM schedules were less accurate than the baseline CPM schedules. Mr. Zielinski, the author of these CPM schedule updates, gave credible testimony that he used these schedule updates to communicate news of Sollitt’s progress on the project to the Navy and to subcontractors, Tr. at 1522, and that he believed he was inputting accurate information, Tr. at 1479. For these reasons, the court will favor Mr. Tipton’s second analysis, JE 235, the one which estimated each critical path delay by inserting a delaying event into the CPM schedule update closest in time to the alleged delaying event, over his first analysis based on the baseline CPM schedule.

A. Phase I Construction: Allegations that three circumstances chargeable to the Navy delayed project completion and that assessed liquidated damages were not valid

Sollitt alleges that three¹⁷ circumstances chargeable to the Navy delayed the completion of Phase I (Building 122 Areas A & B, Building 122 Area C and the Signalman Range Buildings) construction. The delays are alleged to have been caused by: (1) Navy post-award revisions to the

^{17/} A fourth contention regarding work on relief air ventilation allegedly delaying completion of Areas A & B of Building 122 has been dropped because no liquidated damages were assessed by the Navy for that portion of the project. Sollitt Br. at 23. A fifth contention regarding delays allegedly caused by temporary fencing design changes has also been abandoned by Sollitt. Tr. at 570.

ship's trainer in Area C of Building 122; (2) changes to the electrical service for the chiller serving Building 122; and (3) changes and unforeseen conditions encountered when constructing the Signalman Range Buildings. Defendant argues that Sollitt has not proven that these three alleged circumstances caused the delayed completion of Phase I construction. Def.'s Br. at 17-21. As additional support for its position, defendant argues that Sollitt delayed the completion of Phase I construction primarily because of its tardy procurement of windows, a glass curtain wall and structural steel. Tr. at 29-31. For the reasons discussed below, the court finds that there were concurrent critical path delays chargeable to the Navy and to Sollitt; that these delays cannot be apportioned; and that defendant's assessment of liquidated damages for Phase I construction was not valid.

Sollitt contests two of the several beneficial occupancy dates (BODs) that the Navy reported for various buildings or exterior work at NTC, *compare* Sollitt Br. at 49 *with* SE 2015 (supporting table of data for July 6, 1999 payment to Sollitt). The court endorses the Navy's version of BODs as best supported by the evidence presented at trial, and finds that these dates mark substantial completion of portions of the contract work, *see* Tr. at 2905 (Lt. Odorizzi) (agreeing with Sollitt's counsel's statement that a beneficial occupancy date signified "a point in time when the contractor had completed the work to the point that the portion of the facility could be used"). Here in Table 1, the court reproduces pertinent data from the Navy's 1999 payment document, all of which appears to the court to be reasonably supported by the evidence at trial. SE 2015. The table incorporates the Navy's final modifications to the contract completion dates (CCDs) which were originally set for the three phases of construction, so as to show all of the time extensions ultimately granted by the contracting officer. In addition, the table shows the modified basis for the Navy's assessment of liquidated damages (LDs), a modification which, despite Sollitt's protests that the modification was "cavalier, autocratic and capricious," Sollitt Br. at 48, actually lessened the harshness of the original liquidated damages schedule by breaking the construction phases and the daily charge for liquidated damages into smaller subparts so that, as these subparts of contract construction phases were completed ahead of others, at least some of the liquidated damages contemplated by the contract for that construction phase would not be assessed. It is unnecessary for the court to determine whether this unilateral modification of the liquidated damages formula was a valid modification of the contract – it is reproduced here for the limited purpose of describing how liquidated damages were assessed against Sollitt.

Table 1: Beneficial Occupancy Dates and Liquidated Damages (LDs) Assessed by the Navy¹⁸

Phase	LD portion	CCD-final	BOD	Days Late	LDs \$ per day	LD \$ total
I (Bldg. 122 Areas A & B)	1/3	3/29/96	3/29/96	0	\$3200	\$0
I (Bldg. 122 Area C)	1/3	4/16/96	5/14/96	28	\$3200	\$29,867
I (So. Range Bldg.)	1/6	3/29/96	5/6/96	38	\$3200	\$20,267
I (No. Range Bldg.)	1/6	3/29/96	6/11/96	74	\$3200	\$39,467
II (Bldg. 2B 2nd & 3rd Fl.)	2/3	6/24/96	7/8/96	14	\$3900	\$36,400
II (Bldg. 2B 1st Fl.)	1/3	6/24/96	9/4/96	72	\$3900	\$93,600
III (Ext. work)	1/1	6/18/96	9/4/96	78	\$200	\$15,600
Total liquidated damages assessed by Navy						\$235,200

The court relies on this data in its review of Sollitt’s claims.

1. Post-award revisions to the ship’s trainer in Area C of Building 122

One of the most complex portions of the contract work was building a “ship’s trainer” in Area C of Building 122. JE 233 at 24. “This ship mock-up enables the Navy to train sailors on various shipboard functions[,] including life-safety, refueling at sea, line handling, docking, anchor handling, and

^{18/} Some of the data has been altered in format, and some figures have been rounded off.

ships systems such as lighting, the helm, etc.” JE 382 at 43. Many post-award revisions were made to the ship’s trainer, JE 233 at 24, a mock-up “made of metal studs/drywall/sheetmetal and associated equipment,” JE 382 at 44. The court presents a brief chronology of these revisions and their implementation, as established at trial:

August 19, 1995 - The Navy issued Amendment 14 which contained extensive changes to electrical service and structural steel. JE 126; JE 233 at 24; JE 382 at 47.

November 20, 1995 - Sollitt replied with CX-40, a cost proposal for the changed work in Amendment 14. SE 108.

November 20, 1995 - The Navy issued Amendment 18 which contained primarily some clarification of electrical service and the addition of some lights. JE 144; JE 382 at 47; Tr. at 3212-13 (Mr. Dorn).

January 25, 1996 - The Navy issued Amendment 19 which contained minor changes to electrical service and changes to the fire alarm system. JE 153; JE 382 at 47; Tr. at 530 (Mr. Zielinski).

March 5, 1996 - The Navy issued Modification P00029 which authorized payment for changed work in Amendments 18 and 19. JE 62.

March 14, 1996 - Sollitt sent to the Navy CX-174, a cost proposal for the changed work in Amendment 19. SE 165.

March 21, 1996 - The Navy made a minor change to a line (rope) in Amendment 18, which would now be installed by the Navy, not by Sollitt. JE 167.

March 28, 1996 - Sollitt sent to the Navy CX-128, a cost proposal for the changed work in Amendment 18. SE 180.

March 29, 1996 - The Navy issued Modification P00044 which authorized payment for the changed work in Amendment 14. JE 76.

Sollitt maintains that the revisions to the ship’s trainer delayed critical activities of Phase I construction, and that fifty-nine calendar days of delay are chargeable to the Navy for this issue. JE 235 Issue 103; Tr. at 1760-61 (Mr. Tipton).

Amendment 14 was the biggest change to the ship's trainer, sent to Sollitt on August 29, 1995. JE 233 at 24. The other two amendments clarified the work in Amendment 14 and made additional, but less extensive, changes than those included in Amendment 14. *Id.* The court notes that the last substantive revision to the ship's trainer, Amendment 19, occurred on January 25, 1996. The Navy eventually extended the contract completion date for Area C from February 7, 1996 to April 16, 1996. SE 2015. The Navy accepted the ship's trainer and Area C for occupancy on May 14, 1996. *Id.* The Navy charged Sollitt liquidated damages for twenty-eight days of delay for Area C. *Id.* The court must examine the period from August 29, 1995 through May 14, 1996 and determine whether Sollitt's analysis of critical path delays is supported by credible evidence of any delays chargeable to the Navy.

Certainly, an extensive revision to a complex construction item, which itself had to be further amended over the course of several months, would appear to be a likely cause for delayed contract work. This was indeed proved at trial. *See* Tr. at 522-31 (credible testimony by Mr. Zielinski). However, Sollitt must further prove that the revisions to the ship's trainer caused *critical path* delay. *Hoffman*, 40 Fed. Cl. at 197-98 (stating that "when the contract utilizes CPM scheduling, the contractor must prove that the critical path of work was prolonged in order to prove a delay in project completion").

The court notes that Sollitt stopped providing CPM schedule updates in March 1996. Thus, for the critical months of April and May 1996 there is no contemporaneous evidence of the final critical path activities for Area C.¹⁹ The parties' experts provided the court with estimates of the critical path activities for these months, which differ greatly. *See* JE 233 Tab 2 at 25-26; JE 235 Issue 103; JE 382 at 48-49. But both analyses made three logical ties between the ship's trainer revisions and related follow-on activities that might be delayed, and these the court holds are credible conclusions: (1) changes in structural steel would affect the erection of metal stud walls in the ship's trainer; (2) changes in electrical work would affect finish work in the ship's trainer; and (3) changes in large equipment to be delivered would affect the ability to close in the glass curtain wall opening. *See* JE 233 Tab 2 at 25-26; JE 235 Issue 103; JE 382 at 48-49. The testimony of Mr. Zielinski and Lt. Odorizzi supported these conclusions, although their opinions as to the delaying impact of the ship's trainer revisions differed.

The court finds that the changes to structural steel and the electrical revisions did delay the

^{19/} The court acknowledges that at the beginning of the project, two critical paths were reported on separate CPM schedules, one ending February 7, 1996 for Phase I construction, the other ending May 31, 1996 for Phases II and III construction. However, when the Navy granted different time extensions to different portions of Phase I construction, *see* SE 2015, the different contract completion dates within Phase I construction may be seen as splitting the Phase I critical path into two critical paths, for the purposes of analyzing the application of liquidated damages. Area C had, after these contract modifications, a contract completion date of April 16, 1996, different from the rest of Phase I construction, which ultimately had a March 29, 1996 contract completion date. It is the Area C critical path that is discussed here.

critical path of Area C by pushing out the completion date of Area C into May 1996. *See* JE 235 Issue 103 (showing stud framing in February and March 1996 and finish work activities occurring in March, April and May 1996); SE 193 (Sollitt April 18, 1996 letter giving detail of when stud framing and electrical revisions were implemented). These delays were unreasonable and entirely chargeable to the Navy. Allegations of concurrent Sollitt delays cloud the issue of the close-in of the glass curtain wall of Area C and will be discussed *infra*. Because Mr. Tipton’s updated analysis finding critical path delays related to the ship’s trainer revisions was supported by factual evidence and was more credible than Mr. Dorn’s analysis,²⁰ the court finds that twenty-eight calendar days²¹ of Area C critical path delay, all of the delay days for which liquidated damages were assessed against Sollitt, are chargeable to the Navy.

2. Changes to the electrical service for the chiller serving Building 122

Sollitt claims that it encountered a Type I differing site condition when, after it had installed the chiller²² to serve Building 122, it discovered that the 600 amp electrical service its electricians had wired pursuant to the contract drawings was not sufficient to power the chiller it had installed. Sollitt argues that “the work required to change the electrical power to the chiller[] . . . [caused] delay arising out of this set of circumstances and . . . Sollitt is entitled to an equitable extension of time of sixty-three calendar days to May 27, 1996 with respect to Phase I of the Project.” Sollitt Br. ¶ 70. It is not necessary, however, to decide whether any delays associated with power problems for the chiller were chargeable to the Navy, because it is obvious to the court that substantial completion of Phase I was

^{20/} Mr. Dorn’s analysis of this issue, while thorough and helpful in many respects, did not quantify any delays related to the revisions of the ship’s trainer, and also did not account for the different contract completion dates for Area C and other parts of Phase I construction. *See* JE 382 at 48-49.

^{21/} Mr. Tipton estimated that fifty-nine calendar days of delay would be chargeable to the Navy for this issue. Because the court has accepted the beneficial occupancy date and the modified contract completion date for Area C, as shown in Table 1, as accurate, Sollitt’s contract performance, in the context of liquidated damages, could have, at most, been delayed twenty-eight calendar days by this issue. The court cannot find more days of delay to the critical path than were actually experienced by the contractor. Mr. Tipton’s analysis was not similarly constrained. *See* Tr. at 1762 (Mr. Tipton) (stating that his figure is “what [Sollitt] would have been justified in asking for [as of November 1995],” not a figure which reflects delayed performance that ended on May 14, 1996). Plaintiff’s counsel stated and Mr. Tipton agreed that “the 59 days is the delay in completion of the project because of this event, not the delay itself.” Tr. at 1762. The logic, or illogic, of this aspect of Mr. Tipton’s methodology for estimating critical path delays is not adopted by the court.

^{22/} The chiller here was mounted outside Building 122 and provided cool water to heat exchangers which air-conditioned the building. Tr. at 155 (Mr. Strong).

not delayed by the rewiring of the chiller's electrical service.

The Navy accepted all of Building 122 for occupancy before any of the rewiring of the chiller occurred. The BOD for Areas A and B of Building 122 was March 29, 1996, and for Area C of Building 122 the BOD was May 14, 1996. SE 2015. Sollitt claims that the rewiring of the chiller occurred from May 21 through May 27, 1996, Tr. at 1774 (Mr. Tipton), and these dates are supported by invoices from Sollitt's electrical subcontractor, JE 235 Tab 6. Because no liquidated damages were assessed for Building 122 after the substantial completion date for this building of May 14, 1996, SE 2015, the alleged delay, occurring afterward, had no impact on the critical path of Phase I construction or on the assessment of liquidated damages for Building 122. Mr. Tipton, when confronted with this flaw in his critical path analysis, admitted that he had relied on the last CPM update in March 1996 and that there were no CPM updates for April or May 1996 to provide him with more accurate data concerning substantial completion of Building 122. Tr. at 1842-44. This may explain his inaccurate conclusion that the substantial completion of Building 122 occurred on May 27, 1996. JE 235 Issue 105.

No critical path delays for the rewiring of the chiller are chargeable to the Navy.

3. Changes and unforeseen conditions encountered when constructing the Signalman Range Buildings

Sollitt claims it experienced eighteen calendar days of critical path delay to Phase I construction due to changes and unforeseen conditions encountered when constructing the Signalman Range Buildings [Range Buildings].²³ Sollitt Br. ¶ 89. Although Sollitt alleged that the Navy was responsible for several delays to the Range Buildings, including differing soil conditions and the diversion of work from the Range Buildings to the Pump House, *id.* at 24-27, Sollitt's expert estimated that any critical path delays were due to revisions to the flagpoles destined to be installed in front of each of the facing buildings. *See* JE 233 Tab 2 at 32 ("In the final analysis, it was the flagpole that governed in the overall delay to these buildings."); Tr. at 1786 (Mr. Tipton) (averring that "by virtue of the flag pole," the Range Buildings were on the critical path for Phase I construction). Mr. Tipton also concluded that the flagpoles were not holding up any other construction activity except substantial completion. *See* Tr. at 1782 (stating that "there was no follow-on [activity delayed by the flagpoles], so the completion of the flag pole would have been substantial completion of the range buildings").

The evidence before the court supports the following chronology concerning the flagpole revisions:

^{23/} "[T]he range buildings were [new construction and were] two . . . single-story structures[] that were separated by a football field and a half . . . that had facilities for various communication between the two . . . [and personnel would be] able to signal utilizing flags and other ways . . . simulating visual communication say between ships." Tr. at 321-22 (Mr. Strong).

August 28, 1995 - Sollitt submitted RFI 73 to the Navy, to determine the “exact location of flag poles for each booth [Range Building].” SE 65.

October 5, 1995 - The Navy responded and attached drawings of revisions to the flagpoles themselves, with detailed wind tolerances. *Id.*

October 25, 1995 - Sollitt secured prices for the revised flagpoles. JE 235 Issue 107.

January 19, 1996 - Sollitt submitted cost proposal CX 88, requesting \$1907 for the revised flagpoles. SE 134.

March 7, 1996 - Sollitt and the Navy negotiated amounts for various CXs and the Navy circulated Modification P00033 which included \$1899 for CX 88. However, negotiations failed and Modification P00033 was not signed. JE 66; SE 213 (letter from Lt. Odorizzi discussing the disagreement over time extensions that prevented Sollitt from signing P00033).

April 3, 1996 - Flagpoles were delivered to NTC. JE 235 Issue 207.

April 12, 1996 - Flagpoles were installed in front of the Range Buildings. *Id.*

April 29, 1996 - Sollitt’s flagpole supplier informed Sollitt that the flagpoles delivered to NTC could not be fixed on-site to meet the Navy’s revised requirements and had to be returned and modified and that this would take at least three days. SE 201.

May 2, 1996 - The Navy informed Sollitt by letter that the flagpoles delivered to NTC and installed in front of the Range Buildings were inadequate and had to be corrected or replaced. SE 213.

May 3, 1996 - Sollitt directed its flag supplier to retrieve and fix the flagpoles.

May 6, 1996 - The Navy accepted the South Range Building for occupancy (beneficial occupancy date, or BOD). SE 2015.

May 15, 1996 - Sollitt stated in a letter to the Navy that the flagpole

procurement was done by Sollitt in good faith, but noted that the “wind loading[] criteria” specified in the October 5, 1995 RFI response constituted added work not yet incorporated into the contract. SE 231 at 1. The letter also indicated that the delivered flagpoles were “in accordance with” the original contract criteria and the approved submittals. *Id.* at 2. Sollitt’s letter stated that the October 5, 1995 revisions were “not part of our contract responsibility.” *Id.* at 1.

May 20, 1996 - The Navy issued Modification P00044, a unilateral contract modification which approved \$1899 for the flagpole revisions. JE 76.

June 11, 1996 - The Navy accepted the North Range Building for occupancy (beneficial occupancy date, or BOD). SE 2015.

April 11, 1997 - Sollitt submitted CX 243 for flagpole revisions, claiming \$4965 “to complete extra work associated with flag pole revisions after installation of specified flag poles.” SE 359.

Mr. Tipton’s updated analysis of critical path delays related to the flagpole revisions, when tested against this chronology, makes no sense. His conclusion is that April 12, 1996, the date the flagpoles were installed, marked substantial completion of the Range Buildings. Tr. at 1782. April 12, 1996 does not correspond with the beneficial occupancy date of either the South Range Building or the North Range Building, which were accepted on May 6 and June 11, 1996, respectively. And if the flagpoles were indeed markers of substantial completion for these buildings, as Mr. Tipton urges, the rejection of the installed flagpoles in May 1996 would indicate that substantial completion of the Range Buildings must have occurred subsequent to the modification of the flagpoles, which occurred sometime after May 3, 1996, not on April 12, 1996.

Another problem with Mr. Tipton’s critical path analysis for the flagpole revision is that it reports every delaying activity attributable to the Navy, such as “RFI #73 Response [29 days]” and “Navy reviews CX 88 [39 days],” but it neglects to acknowledge a delay for ‘Sollitt prepares CX 88,’ which would account for approximately eighty-six days of delay, from October 25, 1995 to January 19, 1996. Even if the court were to accept Mr. Tipton’s contention that the flagpoles were on the critical path for completion of the Range Buildings, his analysis does not accurately describe the delaying activities which would be chargeable to both parties. Further discussion of Mr. Tipton’s critical path analysis of construction of the Range Buildings is unwarranted, because his analysis of this issue lacks a logical foundation from which accurate estimates of critical path delays could be derived.

Sollitt has not met its burden to prove that at least some critical path delays were caused by the Navy in the construction of the Range Buildings. Therefore, no critical path delays to Phase I

construction are chargeable to the Navy for this issue.

4. Procurement Delays Chargeable to Sollitt

Defendant asserts that “Sollitt’s own delays in the procurement of steel, windows, and glass curtain walls²⁴] significantly impacted upon Sollitt’s ability to complete the project.” Def.’s Br. at 11. There was extensive testimony on this topic, and defendant’s expert reported that these procurement delays delayed the substantial completion of Building 122. JE 382 at 57 (concluding that procurement of windows, curtain walls, and steel delayed the critical path of Building 122 construction). Mr. Dorn’s analysis estimated that although the Navy was responsible for some critical path delay for Phase I construction, the predominating delays were these procurement delays chargeable to Sollitt. *See id.* at 461 (table titled “Major Phases of Bldg 122 Area C” showing that various procurement delays had greater impact than a differing site condition delay). Mr. Dorn estimated that the “dry-in” of Area C of Building 122, in other words the completion of the outer shell of the building to keep out the elements, was delayed sixty-five working days, and he reported that only five of these delay days were chargeable to the Navy. *Id.* The court discusses each of the alleged procurement delays in turn.

There is no dispute that Sollitt was late in procuring windows for the project. Tr. at 3278 (Mr. Maziarka) (admitting that window procurement was delayed and that “we were not going to get the windows on time”). There is also no dispute that window procurement was on the critical path of the project, at least during the early months of construction. *See* JE 382 at 84 (Sollitt monthly report dated June 28, 1995 stating that “windows and roofing are both critical to the dry-in of Building 122”); Tr. at 2285 (Mr. Tipton) (agreeing that window procurement was on the critical path because Mr. Zielinski “had [window procurement] tied through the dry-in of the building”). But as numerous witnesses testified, Sollitt was able to work around the window procurement delay by installing temporary plastic enclosures in the window openings and heating the workspaces inside Building 122 Areas A and B. *See, e.g.*, Tr. at 3278-79 (Mr. Maziarka) (explaining the common industry practice of using plastic on wood frames in window openings when window procurement is delayed, and that heated spaces within allow for work such as drywall to proceed). Thus, because critical activities were no longer delayed, window procurement was removed from the critical path for Phase I construction. Tr. at 2286 (Mr. Tipton). Defendant did not prove that tardy window procurement delayed the critical path of Phase I construction.

^{24/} A glass curtain wall is a wall composed entirely of windows separated by a grid of supporting structural members. *See* Tr. at 122 (Mr. Maziarka) (defining the curtain wall construction here as “installing aluminum framing . . . and you put glass in this aluminum framing . . . [a]nd that total assembly of the aluminum framing and the glass is referred to in our industry as a curtain wall”). Although regular windows and the windows in a glass curtain wall are similar, the court will distinguish them here for purposes of clarity by referring either to windows, by which it means windows installed in masonry walls, or curtain walls.

Structural steel procurement for the construction of the new addition to Building 122 known as Area C was also delayed. *Compare* Tr. at 1496 (Mr. Zielinski) (admitting that as of September 28, 1995 steel had not been delivered to NTC) *with* GE 1028 (showing August 9, 1995 to be the scheduled date for the completion of steel procurement according to the baseline CPM schedule). Defendant successfully established that delays to steel procurement were chargeable to Sollitt, and that the most likely explanation for the delay was Sollitt's choice of a non-certified shop as a structural steel supplier. Tr. at 132 (Mr. Maziarka) (stating that Sollitt accepted a bid from a steel supplier who promised to obtain the required certification, but who did not do so). Sollitt hired a testing consultant to certify the steel it was procuring, and it is the records of the testing consultant which document the late arrival of structural steel at NTC. JE 382 at 90-99.

The critical path for constructing Area C of Building 122 included a chain of follow-on activities that depended on the procurement of structural steel: erection of structural steel, masonry and installation of the curtain walls. JE 382 at 112-13 (updated July 1995 CPM schedule and updated July 1995 CPM schedule as corrected by Mr. Dorn); SE 569 (baseline CPM schedule). Mr. Dorn's credible testimony established that this chain of activities remained on the critical path for Area C of Building 122, and that the tardy steel procurement caused delays along this critical path. Tr. at 3140 (using scheduling software to show that when steel procurement was accurately entered into Sollitt's updated schedules, that "this shows . . . that due to the delay in steel [procurement], the project was not going to finish [on time]"). The critical nature of steel procurement was supported by several witnesses' testimony that the erection of the structural steel was a prerequisite for masonry work, which was a prerequisite for curtain wall construction. *See, e.g.*, Tr. at 125 (Mr. Maziarka) ("Area C of [Building] 122 was a new addition. It entailed putting up a structural steel frame, providing masonry panels. And once the masonry and the pre-cast belt course was completed, we were then able to install the curtain wall in Area C of Building 122."); Tr. at 2191 (Mr. Tipton) (stating that "the curtain wall needed the masonry [completed] in order to finish the final procurement of [the curtain wall]").

The critical path delays due to tardy steel procurement were not established in precise, calendar day terms, but the court finds that the steel procurement, originally scheduled to end August 9, 1995, was completed no earlier than September 28, 1995. *See* JE 382 at 99 (showing that structural steel inspections were conducted off-site at Sollitt's structural steel supplier on September 28, 1995); GE 1028 (showing an originally scheduled end date of August 9, 1995 and an actual end date before October 15, 1995 for steel procurement); JE 382 at 461 (showing August 1, 1995 and early October 1995 dates, respectively, for scheduled and actual steel procurement dates). The court deems this delay to be chargeable to Sollitt, and finds that some or all of the twenty-eight calendar days of critical path delay for which liquidated damages were assessed to Sollitt on Area C of Building 122 were caused by the tardy steel procurement. No more precise estimate of the critical path delays for this issue is discernable from the record before the court.

The curtain wall procurement was a follow-on activity to the steel procurement. The court was not able to determine whether delays in curtain wall procurement had an independent cause other than

tardy steel procurement. Defendant's contention that additional critical path delay could be attributed to Sollitt's tardy procurement of windows for the curtain wall appeared to have some merit, but the evidence to support this contention consisted mostly of Mr. Dorn's hypotheses. Sollitt's argument that the curtain wall was delayed because large equipment had to be brought in beforehand through the curtain wall opening also was not persuasive, because there was a dearth of documentary evidence or testimony from fact witnesses supporting this theory. Instead, the court finds that the curtain wall delays were largely a consequence of delays in structural steel procurement, and that the steel procurement delays account for most, if not all, of the delays experienced in installing the curtain wall.

5. Apportionment of Concurrent Critical Path Delays of the Parties

Sollitt proved that twenty-eight calendar days of delay to the substantial completion of Area C of Building 122 were chargeable to the Navy due to revisions to the ship's trainer. But some or all of those twenty-eight days of critical path delays to Area C of Building 122 would also be chargeable to Sollitt for its concurrent delays in steel procurement. In addition, the delay in the substantial completion of the Range Buildings was not proved to be excusable, and therefore Sollitt would be responsible for its delay for this portion of Phase I construction, as well. These delays are intertwined and cannot be apportioned with any certainty.

For the late completion of Phase I construction, the Navy assessed liquidated damages in the amount of \$29,866.67 for Area C of Building 122, \$20,266.67 for the South Range Building, and \$39,466.67 for the North Range Building, for a total of \$89,600.²⁵ SE 2015. The contract's liquidated damages provision, however, treated all of Phase I construction as one group of activities for which delays to substantial completion would trigger damages specified at a daily rate of \$3200. JE 23 (Pre-Award Amendment 0002). Both the Navy's assessment formula, SE 2015, and an alternative formula presented by Sollitt in its post-trial brief, Sollitt Br. at 49, are unilateral attempts to modify this contract term. The court, however, must try to apportion liquidated damages as these damages are defined by the contract term that was mutually agreed to by the parties. *See Wise v. United States*, 249 U.S. 361, 366-67 (1919) ("The parties to the contract, with full understanding of the results of delay and before differences or interested views had arisen between them, were much more competent to justly determine what the amount of damage would be, an amount necessarily largely conjectural and resting in estimate, than a court or jury would be, directed to a conclusion, as either must be, after the event, by views and testimony derived from witnesses who would be unusual to a degree if their conclusions were not, in a measure, colored and partisan.").

Apportionment of liquidated damages for Phase I construction, as specified by the contract at \$3200 per day of late completion, would require the court to discern one critical path wending through all of Building 122 and the Range Buildings toward substantial completion of Phase I construction, and to apportion concurrent delays of the parties along this critical path. There was no expert opinion

²⁵/ The Navy rounded off the total of liquidated damages to eliminate one cent. SE 2015.

presented to the court which attempted to trace one critical path through Phase I construction. In addition, neither expert attempted to apportion delays attributed to each party along such a critical path. The court, despite a thorough consideration of critical path delays attributable to each party for discrete portions of Phase I construction, can do no better than these experts. The court would also be required to establish a highly speculative substantial completion date for all of Phase I construction, a date not fixed by agreement of the parties at that time or since. The court cannot even precisely compare and apportion delays to *portions* of Phase I construction, based on this record. Apportionment of liquidated damages based on the *overall* concurrent delays to all of Phase I construction, would be even more speculative, and the record does not offer the tools to accomplish this task.

Thus, even if the court were to follow the lead of *Sauer* and attempt to apportion liquidated damages where the government was partly at fault for critical path delays, 224 F.3d at 1347, apportionment of liquidated damages in these circumstances is impossible. When apportionment of critical path delays is not possible in a government construction project, this court cannot uphold the retention of any liquidated damages by the government. *PCL*, 53 Fed. Cl. at 486, 493; *Karcher Env'tl., Inc.*, PSBCA Nos. 4085, 4093, 4282, 00-1 B.C.A. (CCH) ¶ 30,843 (Mar. 13, 2000). Because the Navy contributed to critical path delays for Phase I construction, and because the critical path delays of the two parties cannot be apportioned with any certainty, the assessment of liquidated damages for Phase I construction was not valid and \$89,600 must be returned to Sollitt.

B. Phase II and Phase III Construction: Allegations that seven circumstances chargeable to the Navy caused extended overhead costs and that assessed liquidated damages were not valid

Sollitt presents allegations that seven²⁶ circumstances chargeable to the Navy delayed the completion of Phase II (Building 2B and the Pump House) and Phase III (exterior site work) construction. These circumstances were: (1) lead paint abatement; (2) work rebuilding the interior of two stairwells; (3) foundation stabilization needed due to “black sand;” (4) addition of fill to level floors for terrazzo installation; (5) additional raised computer flooring; (6) cypher lock wiring; and (7) revisions to smoke dampers in ventilation ducts. Defendant argues that Sollitt has not proven that these seven circumstances caused the delayed completion of Phase II and Phase III construction. Defendant also argues that Sollitt delayed critical path activities. Testimony at trial debated whether some of the delaying work that Sollitt claims was added post-award by the Navy was actually work that Sollitt had responsibility for under the contract as bid, *see, e.g.*, Tr. at 2379-81 (Lt. Odorizzi) (describing dampers problem as Sollitt’s responsibility), 3295 (Mr. Maziarka) (describing dampers problem as the Navy’s

²⁶/ Sollitt provided expert and other lay witness testimony in support of quantified equitable extensions of the contract completion date for each of these seven circumstances. Although Sollitt also alluded to other delays allegedly caused by the Navy or by unforeseen conditions, *see* Sollitt Facts at 35-41, these other circumstances were not quantified as to their delaying effect and were not accorded significant weight in the court’s critical path delay analysis.

responsibility), sometimes referred to by the parties and the court as “bid-base contract work.” As discussed below, the court finds that although Sollitt presented credible evidence of unreasonable delay to the critical path chargeable to the Navy, Sollitt has failed to apportion the delay chargeable to the Navy and to its own conduct. Because the court cannot apportion the critical path delay in Phase II and Phase III construction, Sollitt cannot recover on its extended overhead claim in Count I.

1. Lead abatement

Early on in the project, Sollitt encountered “loose, flaking paint on some of the remaining walls in [interior] areas of [Building] 2B, and . . . a good part of it was established to have levels of lead that were considered hazardous.” Tr. at 178 (Mr. Strong). Sollitt asserts that the lead abatement it was forced to perform in response to this condition was a change to the contract imposed by a Type I differing site condition.²⁷ Defendant asserts that either there was a patent ambiguity in the contract specifications applicable to lead abatement work and it was Sollitt’s duty to inquire regarding this ambiguity, or that the more specific contract specifications required Sollitt to perform lead abatement work because these specific terms controlled over more general terms.

The parties’ experts disagreed as to whether the lead abatement work became a critical path activity. Tr. at 1789 (Mr. Tipton), 3229 (Mr. Dorn). Mr. Tipton’s critical path analysis seemed more credible. Lead abatement, requiring containment of large work areas on all three floors in Building 2B, would necessarily impact the interior demolition schedule of the project, Tr. at 1789, a fact that Mr. Dorn admitted, Tr. at 3229. Mr. Dorn did not address delays related to lead abatement work in his report, finding the issue to be “too speculative.” JE 382 at 1-8. At trial, Mr. Dorn testified that Sollitt’s delay in window procurement was a concurrent and greater delay to the critical path, so the lead abatement work was “irrelevant.” Tr. at 3229. There was inadequate proof offered into evidence to support Mr. Dorn’s conclusory statement. The court finds, instead, that the weight of evidence supports Mr. Tipton’s estimate of twenty-three calendar days of critical path delay related to lead abatement work. JE 235 Issue 201. The only question is whether that delay is chargeable to the Navy.

To prove that the lead abatement was caused by a Type I differing site condition, Sollitt had to establish that the contract documents represented that this lead abatement would not be Sollitt’s responsibility, and that Sollitt acted as a reasonably prudent contractor in interpreting the contract documents. *See Youngdale*, 27 Fed. Cl. at 528 (requiring proof of reasonable reliance by the contractor on the contract documents and that those documents showed conditions materially different from those the contractor encountered). If there are conflicting provisions in a government contract that create an ambiguity, however, the contractor’s interpretation will only prevail if the ambiguity thus

^{27/} Type I differing site conditions are “subsurface or latent physical conditions at the site which differ materially from those indicated in this contract.” 48 C.F.R. § 52.236-2(a)(1) (1994).

created was not a patent ambiguity.²⁸ *NVT Techs., Inc. v. United States*, 370 F.3d 1153, 1162 (Fed. Cir. 2004). If the contract contains a latent ambiguity, the contractor's interpretation may be adopted if it is reasonable and the contractor relied upon that interpretation in preparing its bid. As the Federal Circuit stated in *Turner Constr. Co. v. United States*, 367 F.3d 1319 (Fed. Cir. 2004):

When a dispute arises as to the interpretation of a contract and the contractor's interpretation of the contract is reasonable, we apply the rule of *contra proferentem*, which requires that ambiguous or unclear terms that are subject to more than one reasonable interpretation be construed against the party who drafted the document.

Id. at 1321. The contractor must also prove that it relied on its reasonable interpretation of the contract terms. *P.R. Burke*, 277 F.3d at 1356 & n.3.

The evidence presented at trial favors Sollitt's interpretation of the contract terms concerning lead abatement. The Navy had no fact or expert witnesses who testified that Sollitt was required by the contract to abate all lead paint encountered when remodeling Building 2B. Instead, the Navy relies on the contracting officer's final decision of December 21, 1998, which stated that the contract specifications applicable to lead abatement presented a patent ambiguity and that the contractor had not fulfilled its duty to inquire, Compl. Ex. 2 at 5. The court reviews first the relevant contract provisions, and then the factual scenario to which those provisions must be applied.

Contract specification 01560 states:

All known hazardous materials are indicated on the drawings. If additional material that is not indicated on the drawings is encountered that may be dangerous to human health upon disturbance during construction operations, stop that portion of the work and notify the

^{28/} The contractor's duty to inquire into patent ambiguities has recently been described by the Federal Circuit:

An ambiguity will only be construed against the government if it was not obvious on the face of the solicitation and reliance is shown. If the ambiguity is patent, it triggers a duty to inquire. A patent ambiguity is one that is "obvious, gross, [or] glaring, so that plaintiff contractor had a duty to inquire about it at the start." If an ambiguity is obvious and a bidder fails to inquire with regard to the provision, his interpretation will fail.

NVT Techs., Inc. v. United States, 370 F.3d 1153, 1162 (Fed. Cir. 2004) (citations omitted).

Contracting Officer immediately. Intent is to identify materials such as PCB, lead paint, and friable and nonfriable asbestos. . . . If the material is hazardous and handling of the material is necessary to accomplish the work, the Government may issue a modification pursuant to “FAR 52.243-4, Changes” and “FAR 52.236-2, Differing Site Conditions” or perform the work with its own resources.

JE 94, Part A, § 01560 ¶ 1.6.2. But contract specification 02090, Lead-Containing Paint Removal, to which is appended amendment 0009, Removal and Disposal of Lead-Containing Paint, states:

All painted surfaces are suspected to contain lead. Remove paint in order to completely expose the substrate. Take whatever precautions are necessary to minimize damage to the underlying substrate.
[Amendment 0009] Existing materials not to remain (demolition material), when demolished without separating lead-containing paint from other materials of construction, can be disposed of as common demolition waste without regard to lead-based paint which was tested and shown to be below the regulated values for toxic wastes under RCRA.

SE 94, § 02090 ¶ 3.3. Mr. Strong testified that when reading the contract documents as a whole, including the drawings and specifications, a reasonable interpretation would be that Sollitt had notice that there would be some lead-based paint encountered during demolition, that Sollitt should take precautions during removal of the partitions and interior walls, and that there would be no need for a separate construction activity for lead abatement because there were no known hazardous levels of lead in Building 2B. Tr. at 180-86. Sollitt saw no line item for lead abatement in the engineer’s cost estimates for this project,²⁹ see Tr. at 184-86, 308-09 (Mr. Strong) (noting that asbestos abatement was in those cost estimates but lead abatement was not); JE 92 (engineer’s cost estimates not obviously including lead abatement), and Sollitt did not include any lead abatement costs in its bid for the project, Tr. at 176 (Mr. Strong), which shows that Sollitt relied on there being no lead abatement included in the contract work.

The court finds that the contract documents do not present a patent ambiguity. Mr. Strong

^{29/} The government’s cost estimates do not control over specifications or drawings, when those specifications or drawings are clear. See, e.g., *Walter Y. Arakaki, General Contractor, Inc.*, ASBCA No. 42,536, 92-1 B.C.A. (CCH) ¶ 24,369 (Sept. 5, 1991) (“[A] contractor whose bid includes no cost for work plainly specified in a drawing because the work is not explicitly mentioned in the contract bid items or pay items, cannot recover for extra work or a constructive change order.”). But here, it is not clear from either the drawings or specifications that lead abatement work and associated costs were anticipated.

presented credible evidence that the drawings and specifications could be read to warn of low levels of lead in painted surfaces, and the bid was prepared accordingly. Defendant presented no testimony that would show that this is an unreasonable interpretation. The unexpected presence of high levels of lead in the paint revealed the latent ambiguity in the contract specifications. Sollitt's interpretation of those ambiguous specifications was that a modification of the contract would be appropriate if hazardous levels of lead were encountered. The only witness testifying as to the reasonableness of that interpretation had experience in the construction industry. Because that testimony was uncontroverted, the court finds that Sollitt reasonably expected a contract modification for increased costs and time related to lead abatement if hazardous lead paint was encountered.

Sollitt contacted the Navy in June 1995 and alerted Lt. Odorizzi that the peeling paint containing lead was an "unforeseen hazardous material." SE 25. The Navy responded that Sollitt had to "abate all painted surfaces in both buildings 2B and 122." Sollitt countered, again in June 1995, that it was both the level of lead, and the extent of the peeling paint, which constituted a changed condition and which merited an equitable adjustment for added costs and a time extension. SE 34. A lower level of lead in the peeling paint would have been susceptible to less expensive demolition techniques. Tr. at 311 (Mr. Strong). Mr. Ice, a Guernsey employee, wrote a memo in July 1995 which analyzed contract specifications and opined that "the overall intent of the Contract Documents is to provide for the safe removal of lead based paint that is either on walls to be demolished, or on surfaces that are to receive new work which require the substrate to be free of foreign substances." JE 120. Mr. Ice concluded that "[i]t is not readily apparent anywhere in the Contract that all lead based paint shall be removed from the structure." *Id.* Mr. Ice also noted that the deterioration of the interior painted surfaces could have been aggravated due to a heating system failure subsequent to Sollitt's walk-through inspection but prior to the commencement of construction, and that "further negotiat[ion]" should occur because the deterioration was "not clearly addressed in the Contract Documents." *Id.* No compromise on this issue occurred. Notwithstanding the disagreement on the scope of contract work, Sollitt performed the lead abatement to the Navy's satisfaction. Tr. at 183-85, 320.

Sollitt encountered a differing site condition when hazardous amounts of lead were found throughout Building 2B. Sollitt's lead abatement work delayed the critical path of Phases II and III construction by twenty-three calendar days.

2. Work rebuilding the interior of two stairwells

Sollitt encountered deteriorated existing clay tiles on the walls in the two north stairwells of Building 2B. The Navy ordered Sollitt to remove the clay tiles and replace them with a different wall covering, and the parties agreed to a contract modification to pay Sollitt for the added work caused by this differing site condition. JE 233 Tab 2 at 37; JE 53 (Modification P00020). Mr. Tipton estimated that the added work delayed the critical path by five calendar days. JE 235 Issue 203. Mr. Tipton's analysis of why wall rebuilding in two stairwells held up construction of Building 2B was less than persuasive:

It is evident the added work due to [clay tile in the two north stairwells] affected the completion of drywall. As there were drywall activities in the baseline schedule for stairwells specifically, I tied the delay events to activity 935, DRYWALL 3RD FL 100%. The scheme in the baseline is to work from the third floor down to the first, so that by tying the completion of the masonry to activity 935, the drywall contractor would be starting the stairwells at the same time as the third floor, thereby allowing for an efficient flow of work.

. . .

[W]hen combined with the remaining activities from delayed activity to substantial completion, they form a critical path.

JE 233 Tab 2 at 37. The court is unpersuaded that tying events together for “efficient flow of work” to create “a critical path” (emphasis added), necessarily reflects an impact to *the* critical path of Phases II and III construction. Mr. Tipton’s testimony at trial did not reflect the logic of this issue in his written report. Rather than focus on the alleged delay to drywall work on the third floor, he stated that the clay tile removal became a critical path activity because “of the additional work and the time required to accomplish that work before the contract foundation work could be completed.” Tr. at 1795. Neither of these hypotheses appeared credible to the court. A project’s critical path is composed of interrelated activities whose sequence is imposed by logical ties of precursor and successor activities - the logic of Mr. Tipton’s alleged critical path in this instance is not apparent.

Mr. Dorn’s explanation of why the stairwell work did not become part of the critical path is more plausible. His report indicated that “stairwells are the last items to be worked . . . because workers usually damage the stairwells during the course of construction by moving equipment/materials through the stairwells.” JE 382 at 52. While both experts agreed that drywall work was on the critical path for Building 2B, the evidence does not support Mr. Tipton’s logic tie which delayed all drywall work until the interior of the two north stairwells could be rebuilt. There could have been many causes for the delay to the drywall in Building 2B. For this reason, the court finds no delay to the critical path due to the rebuilding of the stairwell interior walls.

3. Foundation stabilization needed due to “black sand”

It is undisputed that Sollitt was entitled to a contract change in order to deal with the discovery of “black sand” fill behind the foundation of the south wall of Building 2B. *See* Tr. at 1274 (Defendant’s counsel) (“We specifically didn’t contest entitlement in our pretrial memorandum . . . [t]o the black-sand issue.”). This unsuitable fill, a fine sand that ran out from underneath the building during excavation after a loading dock was removed, prevented Sollitt from proceeding with the original plan for renovations to the foundation wall and an abutting sidewalk. Sollitt submitted RFI 60 to the Navy on August 2, 1995 asking for direction on how to resolve the problem. SE 50.

Sollitt's contention is that the Navy took so much time in developing a solution for the problem that delays in completing the foundation as redesigned eventually delayed critical path activities related to Phase II construction on Building 2B and Phase III exterior site work near Building 2B such as paving and landscaping. Defendant, on the other hand, asserts that Sollitt delayed the foundation work by not submitting a timely proposal for the changed work. Defendant's expert also testified that the critical path did not include the changed foundation work because the exterior site crew was delayed on site work at Building 122 and was not ready to work around Building 2B until after the foundation work had been completed. The court here presents the chronology of events related to this change to the contract work:

8/2/95 - Sollitt submitted RFI 60, notifying the Navy of the black sand situation, and requested direction as to how the new concrete wall could be installed without displacing the black sand material from under the existing building and undermining the foundation. SE 50.

8/24/95 - A testing laboratory visited the site and later confirmed that the existing building could be undermined if the planned concrete foundation wall was constructed according to the contract drawings. SE 60.

9/11/95 - Sollitt sent a letter to the Navy advising that it was still waiting for direction, that it would proceed with the old design as suggested by the Navy's architect despite Sollitt having offered an alternate design, but warned that Sollitt would not be liable for foundation problems. SE 70.

9/12-15/95 - Various inspectors and engineers visited the site and recommended new designs. JE 383A at 096-101.

9/14/95 - The Navy's architect recommended waiting for a new design rather than proceeding with the original contract drawing design. JE 132.

9/18/95 - Sollitt sent a letter to the Navy acknowledging discussions the week before that had confirmed that the Navy would soon issue a new design and provide a sketch to Sollitt for foundation wall construction that would stabilize the black sand. JE 383A at 095.

All of the evidence before the court supports Sollitt's contention that the eight-week delay from early August to late September 1995 was not Sollitt's responsibility. There was credible testimony from Lt. Odorizzi that Sollitt was stopped from proceeding, Tr. at 2882, and that the design for the

changed work was not provided for weeks, Tr. at 2529. Starting in October 1995, however, the Navy does not appear to be responsible for further delay.

9/25/95 - The Navy forwarded to Sollitt its response to RFI 60 which attached a sketch that showed a new foundation wall detail together with masonry and structural steel changes. SE 50.

9/29/95 - Sollitt sent a letter to the Navy acknowledging the receipt of the “direction” and “advised that we are proceeding with this work to prevent additional delay.” The letter also stated that “[w]e would expect to have the proposal to complete this work to the ROICC office by October 11, 1995.” JE 383A at 091.

10/6/95 - Sollitt sub-contractors and vendors prepared cost estimates/proposals for work on the newly-designed foundation wall. *Id.* at 037-045.

10/10/95 - Lt. Odorizzi prepared a cost analysis for the newly-designed foundation wall. *Id.* at 073-075, 087.

10/11/95 - Lt. Odorizzi prepared a request for funding for the change to the contract. *Id.* at 071-072, 087.

The Navy appears to have been ready to review a proposal from Sollitt that Sollitt predicted would be ready by October 11, 1995, and to negotiate a bilateral modification to the contract so that Sollitt would have a promise of payment. There is no record of a timely proposal from Sollitt for this work however.

11/95-1/96 - Sollitt did some excavation work and formed and poured part of the newly designed concrete foundation wall. JE 235 Issue 204 Sheet 1.

11/24/95 - The Navy sent PC 27 to Sollitt with the same sketch of foundation wall detail and requested a cost proposal “at the earliest possible date but no later than 8 December 1995.” JE 145.

There is no record of Sollitt submitting a cost proposal as requested before December 8, 1995. Winter weather hit in January and no further work occurred on the foundation wall until April 1996. Sollitt Br. ¶ 125.

3/20/96 - The Navy unilaterally issued Modification P00031 adding

\$30,150 for changes due to differing site conditions related to the black sand, directing Sollitt to perform the work pursuant to the same sketch provided in September 1995. JE 64.

4-5/96 - Sollitt completed construction of the new foundation wall. JE 235 Issue 204 Sheet 2.

6-7/96 - Sollitt completed masonry that covered the new foundation wall, and completed the abutting sidewalk. *Id.*

8-9/96 - Sollitt completed Phase III exterior site work. *Id.*

9/18/96 - Sollitt submitted CX 39, a cost proposal for \$123,781, for the foundation stabilization and redesigned foundation wall. SE 297.

4/28/99 - The Navy issued Modification P00055, which added \$17,400 to the original \$30,150 allotted to Sollitt for the changes due to the black sand foundation issue, bringing the total added to the contract because of this change to \$47,550. JE 87 at 2.

Once the Navy had issued a sketch for revised foundation wall construction in late September, the record indicates that Sollitt neglected to respond in a timely fashion with a cost proposal. Although Sollitt's witnesses testified that the September 25th sketch was not a complete architectural drawing with all the necessary information, Tr. at 351, 363, 399 (Mr. Strong), or an exact representation of what was eventually built, Tr. at 3306 (Mr. Maziarka), and Mr Maziarka even testified that the final resolution of the black sand issue and clear direction were not provided until March 20, 1996, *see* Tr. at 3273 (Mr. Maziarka) ("We did not receive final authorization and *in essence* the final solution to the black sand problem until we received P00031, which was March 20." (emphasis added)), there is no documentary evidence that the sketch was insufficient direction for Sollitt. The estimates obtained from sub-contractors and vendors on October 6th are evidence that the work proposed was understood by Sollitt. Credible testimony from Mr. Strong established that Sollitt was able to work out details that were not shown in the sketch. Tr. at 351. Sollitt began work on the newly designed foundation wall, which was substantially different from the old design, on November 6th, Tr. at 1797 (Mr. Tipton), and continued substantial construction work on the foundation wall into January. It appears to the court that the delay from September 25th to November 6th was primarily Sollitt's responsibility.

Once the Navy gave clear direction on September 25th, Sollitt should have proceeded with the work as it promised in its September 29th letter and should have negotiated the price for this work with the Navy. The only hard evidence of Sollitt moving forward with either of these tasks is the October 6th bids from Sollitt's subcontractors. Sollitt has offered no credible evidence explaining why Sollitt did not get a cost proposal to the Navy by October 11, 1995. Nor has Sollitt shown why it started work

on the newly-designed foundation wall on November 6th rather than earlier.

Sollitt attempted to explain this delay by suggesting that further refinements to the work proposed in the September 25th sketch consumed time and prevented progress. Tr. at 3306 (Mr. Maziarka). There was credible testimony that the final construction of the foundation wall does not exactly match the sketch offered on September 25th to Sollitt. Tr. at 2979 (Lt. Odorizzi). But not one document was presented to the court that suggested that the Navy further delayed the construction of the newly-designed foundation wall once the sketch was presented to Sollitt. And Sollitt's principal witness on this issue, Mr. Strong, testified that the September 25th sketch represented "a [typical] cross-section of what [the Navy] want[ed] as a final solution" and indicated that Sollitt was "able to do [the remainder of the design for entryways and ends of the building]." Tr. at 351. The preponderance of the evidence shows that the Navy did not further delay Sollitt's work on the black sand issue after September 25, 1995.

The reasons for Sollitt's failure to respond with a detailed cost proposal to the sketch offered by the Navy are unclear. If Sollitt had provided a cost proposal in a timely fashion, the court could have used that evidence to better understand the progress, or non-progress, of the construction of the newly-designed foundation wall. In the absence of evidence of Sollitt's proposed work and proposed costs as envisioned in October 1995, and lacking any contemporaneous documentation of negotiations between the parties at that time, it is impossible for the court to assign responsibility to the parties for the delays encountered in attempting to complete the foundation work on Building 2B before winter weather arrived. Similarly, it is impossible for the court to determine whether the Navy-caused delay in August and September prevented Sollitt from completing the foundation construction before winter, or whether the winter delay was avoidable if only Sollitt had begun construction on the newly-designed foundation wall in October rather than November 1995.

Because of these uncertainties, the court disagrees with Sollitt's contention that "Sollitt's analysis of the delay impact resulting from the N[avy] directed installation of the f[oundation] wall at Building 2B based on the updated CPM schedules is a reasonable basis for determining the delay arising out of this set of [black sand] circumstances." Sollitt Br. ¶ 131. Rather, delays were caused both by the Navy and by Sollitt and the amount of delay attributable to each party remains uncertain. It does appear that these concurrent delays pushed the foundation stabilization problem onto the critical path for Phase II and Phase III construction, JE 235 Issue 204, despite defendant's expert's disagreement with this conclusion, Tr. at 3234-35 (Mr. Dorn). The evidence provided to the court was not sufficient to apportion these delays between the Navy and Sollitt, however, and therefore the court cannot award Sollitt an equitable extension of time for this issue.

Nonetheless, the Navy's unreasonable delay in designing a changed south foundation wall for Building 2B to respond to a differing site condition does affect the Navy's right to assess liquidated damages for the delayed completion of Phases II and III construction. *See infra*.

4. Need for fill to level floors for terrazzo installation

Sollitt contracted to put a terrazzo³⁰ floor in the corridors of all three floors of Building 2B. Tr. at 571 (Mr. Zielinski). The subfloors were discovered to be not level within the tolerance required for this type of installation. Tr. at 573 (Mr. Zielinski). Sollitt alerted the Navy and was directed to survey the subfloors and to estimate the amount of fill needed to bring the subfloors within tolerance. *Id.* Sollitt was paid for the addition of fill to the corridor subfloors proposed in its cost estimates, once revisions were made after the work was completed. Tr. at 580 (Mr. Zielinski). There was no evidence that Sollitt was not entitled to this payment for work added to the contract. The dispute here is whether Sollitt is entitled to a time extension justified by delays to the critical path caused by the need to add fill to the corridor subfloors, and if so, how much of a delay is justified.

Mr. Tipton estimated that adding fill to the corridor subfloors produced fifty calendar days of delay to the critical path of Phases II and III construction. JE 235 Issue 205. Mr. Dorn conceded that adding fill to the corridor subfloors did impact the critical path, but he estimated only five work days of delay to the critical path.³¹ Tr. at 3240. The court will review first the expert estimates, and then consider other evidence in the record.

Mr. Tipton inserted the delaying event of adding fill to the corridor subfloors into the March 1996 CPM schedule update. JE 235 at 2. He appears to have added three types of activities related to this work, “survey,” “quantify” and “fill,” which began in late February 1996. *Id.* Issue 205. The work proceeded from top to bottom of the building, with the last of these activities ending in late May 1996. *Id.* For just the “fill” activities, Mr. Tipton estimated ten days for the third floor, twenty-one days for the second floor, and ten days for the first floor. *Id.*

According to Mr. Tipton, the terrazzo work began, again proceeding from top to bottom of the

^{30/} As it was explained to the court, a terrazzo floor is laid by first laying divider strips on the subfloor to contain the different-colored pours of semi-liquid glue and stone, which, when hardened, are ground down and polished to a hard surface. Tr. at 571 (Mr. Zielinski).

^{31/} Mr. Dorn’s concession was not clearly stated in work days, but his testimony and report indicate that this figure represents work days, not calendar days. *See* Tr. at 3153 (stating that prior to the April 1996 CPM schedule update “you can assume each [terrazzo] floor would be [approximately] 20 work days, which is one [calendar] month”); JE 382 at 39 (describing how in the April CPM schedule update the changed terrazzo work, including the addition of an activity for fill, “grew from 18 [work] days per floor to 30 [work] days”).

building, in mid-March 1996. *Id.* From that point, Mr. Tipton’s analysis shows that there was at least some concurrency between the adding of fill activities on the lower floors and the terrazzo work on the upper floors. *Id.* It is difficult to determine from Mr. Tipton’s report how and to what extent the fill activities continued to delay the critical path activities once terrazzo work had begun on the third floor.³² The initial delay to starting the terrazzo floor installation, a delay of about three weeks, or twenty-one calendar days, is obvious to the court from Mr. Tipton’s data.

Mr. Dorn reviewed the April 1996 CPM schedule update and concluded that “this added fill was responsible for a 5-day impact to the project critical path.” JE 382 at 53. When discussing the April 1996 update, Mr. Dorn reported that this update increased the projected duration of the critical path and now “included the alleged addition [of] fill changed condition (5 [work] days per floor).” *Id.* at 39. Mr. Dorn’s report acknowledges that terrazzo floor installation hampers or halts finish trades working in that corridor. *See id.* (“Coordination of rough-in and finish type work with the terrazzo work in the corridors would be difficult, at best.”). The April 1996 CPM schedule update added approximately twenty-one calendar days to the critical path, according to Mr. Dorn, and it attributed those delays to two causes, electrical work delays and terrazzo floor delays. *Id.* Although Mr. Dorn’s analysis of the data in the April 1996 CPM schedule update may be accurate, his estimate of five work days of delay to the critical path does not appear to reflect the full scope of the fill work.

At trial, the factual evidence confirmed that there was delay to the critical path but exact mathematical certainty remained elusive. Mr. Zielinski testified that the terrazzo work was originally scheduled to begin on March 4, 1996, but that the need for fill delayed the start of terrazzo work until April 4, 1996, or thirty calendar days later, Tr. at 576, a date which conflicts with Mr. Tipton’s mid-March date. JE 235 Issue 205. Mr. Zielinski also testified that the terrazzo subcontractor came on site “very close to the original [baseline schedule] date [in the first week of March 1996].” Tr. at 1004. Lt. Odorizzi testified that “a lot of fill” was required to level the corridor floors. Tr. at 2888. Sollitt requested payment for 710 square feet of fill for the third floor, SE 236; 1071 square feet of fill for the second floor, SE 237; and 1989 square feet of fill for the first floor, SE 274. Sollitt also provided a narrative justification for a requested time extension on June 19, 1996, SE 260, which estimated ten days of delay per floor due to the required addition of fill for the terrazzo installation, *id.* at 6-7.³³

^{32/} Mr. Tipton’s testimony was that terrazzo floor installation “precludes” finish trades from working in that corridor or adjacent rooms. Tr. at 1806. But the fill work, filling in only the low spots in corridors, might not have as great a preclusive effect. *See id.* (Mr. Tipton) (apparently distinguishing between the preclusive effect of terrazzo installation on other trades working along that corridor, and the more limited effect of adding fill to the corridor subfloor because access might not be totally blocked).

^{33/} This narrative justification is not the critical path analysis upon which Sollitt’s time extension claim is now based, but it is evidence of Mr. Zielinski’s appraisal, as of June 19, 1996, of the delays
(continued...)

The court finds that the required addition of fill for the terrazzo installation delayed the critical path of Phases II and III construction by twenty-one calendar days. This figure, although not without some degree of uncertainty, reflects the estimate in the April 1996 CPM schedule update for the fill activities for three floors of Building 2B, and reflects the delay affecting the start of the terrazzo installation, as reported by Mr. Tipton. Further delays due to the addition of fill might have been experienced as terrazzo installation continued, but these were not established by the evidence before the court. Twenty-one calendar days of critical path delay due to addition of fill for the terrazzo installation are chargeable to the Navy.

5. Additional raised computer flooring

On September 5, 1995, the Navy issued a proposed change to the contract and requested that Sollitt provide a cost proposal to construct additional access flooring³⁴ in some second floor classrooms in Building 2B. JE 233 Tab 13. The Navy requested that the cost proposal be returned to the Navy “at the earliest possible date but no later than 19 September, 1995.” *Id.* Clarification of the scope of work was requested by Sollitt in two requests for information it sent to the Navy in October 1995. *Id.* The Navy responded to both of these requests by October 31, 1995, and in particular responded that classrooms 205 and 207 would have access flooring instead of regular flooring. *Id.* Sollitt’s baseline schedule showed that the original access flooring would have been installed in February/March 1996. *Id.* Tab 2 at 45. Mr. Tipton estimates that the addition of more rooms with access flooring caused sixty-five days of delay to the critical path of Phases II and III construction. JE 235.

Although the addition of access flooring³⁵ increased the amount of contract work on the second floor of Building 2B, there was no convincing evidence of delay to the critical path. Even if Sollitt had proved that there was delay to the critical path, the court finds that this delay would not be chargeable to the Navy.

Discerning the critical path for the months of June 1996 through August 1996, the alleged period of delay at issue with the additional access flooring, is difficult because after June 27, 1996, Sollitt provided no more CPM schedule updates. Tr. at 3250-51 (Mr. Dorn); JE 382 at 54. Mr.

³³(...continued)
related to the addition of fill to the corridor subfloors. Tr. at 996-97 (Mr. Zielinski).

³⁴/ Access flooring is a raised floor that allows easy access through removable panels to items such as computer wiring. Tr. at 588-89 (Mr. Zielinski).

³⁵/ Sollitt never established exactly how much extra work was required by the additional access flooring. One of the underlying documents presented mentioned the addition of access flooring in two classrooms, JE 233 Tab 13 (Navy’s response to RFI 108), but the court was never apprised of the size of those rooms or their percentage of the square footage of Building 2B’s second floor.

Tipton's critical path analysis was made without the benefit of updated CPM schedules for July and August 1996. Tr. at 2106-07 (Mr. Tipton). When cross-examined on the topic of how, in the absence of CPM schedule updates, he was sure that a "delaying" event such as the access flooring impacted activities on the critical path that necessarily could not be performed until the additional flooring was completed, Mr. Tipton responded:

We went through the daily logs, and as best we could try to go down and identify work activities that would support the fact that work was going on relative to the delaying events and then look to see that it was consistent with—well, with other work that would be going on at that time frame.

Tr. at 2120-21. But when he was asked at trial to identify even one activity in those daily logs for the period of August 10 through August 23, 1996 that clearly indicated that follow-on work on the second floor, delayed by the addition of access flooring, was taking place, Mr. Tipton was unable to do so. Tr. at 2105-21. Sollitt did not establish that the addition of access flooring on the second floor of Building 2B impacted the critical path.

Most of the delay that Sollitt attributed to the additional access flooring was not due to the work itself, but to an alleged delay in the Navy's delivery of contract modifications to Sollitt. *See* Sollitt Br. at 65 (alleging sixty-five days of critical path delay "[d]ue to the long lead time required to order material and the late release of the change order"); JE 235 Issue 206 (showing more critical path delay due to the Navy's issuance of change orders than due to two work activities related to added access flooring). But Mr. Tipton's analysis fails to charge Sollitt with the most significant delay in this modification to contract work, the delay from October 31, 1995 through February 6, 1996, when Sollitt finally submitted its cost proposal for this work to the Navy. *See* JE 233 Tab 13 (Navy's response to RFI 108 dated October 31, 1995); JE 233 Tab 13 (Sollitt's CX 75 dated February 6, 1996). This delay of over three months is unexplained. The Navy responded one month later on March 5, 1996 with Modification P00029 confirming payment for the additional access flooring, JE 63, and later increased this payment in Modification P00050 on July 2, 1996, JE 82. Even if Sollitt had proved a delay to the critical path due to the additional access flooring, most of the delay it alleges would have been due to its own delayed cost proposal in response to the Navy's proposed change issued on September 5, 1995.

No delays to the critical path of Phases II and III construction for additional access flooring were proved to be chargeable to the Navy.

6. Changes to cypher lock installation

Mr. Tipton estimates that the critical path of Phases II and III construction was delayed twenty-

four days by changes the Navy ordered in the installation of cypher locks³⁶ on doors to some of the rooms on the second and third floors of Building 2B. JE 235 Issue 208; JE 382 at 55; JE 279 at A405-A406 (door schedule included in contract drawings). Mr. Tipton did not suggest that any other work activities were delayed by the cypher locks, but that cypher lock installation was one of the final construction activities and this installation became a critical path activity as it delayed substantial completion of the project. Tr. at 1812-13. Mr. Tipton's expert report showed July 10, 1996 as the approximate completion date of the cypher lock installation. JE 235 Issue 208; Tr. at 1812. Sollitt was never paid its proposed costs for changes to the cypher lock installation. Tr. at 934 (Mr. Zielinski).

Lt. Odorizzi's testimony on the cypher locks issue asserted that no contract work was added and that the Navy's direction regarding installation was clear. Tr. at 2635-40. The court finds, as discussed below in Count XV Section M, that there was no net increase in contract work for the cypher lock installation, but nevertheless finds that Sollitt was delayed by a series of conflicting and confusing directions found in the contract drawings and ongoing communications with the Navy.

Sollitt's contention that the Navy deleted wiring for cypher locks in pre-award Amendment 0004 is ill-founded. *See* Sollitt Br. ¶ 155 ("Amendment No. 0004 . . . deleted cypher lock wiring . . ."). Cypher locks require electricity to operate. Tr. at 1118 (Mr. Zielinski). The deletion of some language referencing cypher locks wiring from the contract drawings was an attempt by the Navy to clarify a confusing instruction concerning that wiring, not to delete the wiring itself. Tr. at 2640 (Lt. Odorizzi). Sollitt's interpretation of that deletion is that Sollitt was required by the contract to install thirteen unwired and useless cypher locks. That interpretation is not reasonable. All installed cypher locks would require wiring as part of the contract as bid; thus, wiring for cypher locks was not added work.

There were, however, other problems with the Navy's directions on how and where to install the cypher locks that did cause delay to Sollitt's performance of that contract work. On the contract drawings, a significant but not obvious error was made in the door schedule (a table of information listing all doors and referencing the corresponding hardware specifications for each) which flagged door 255C for a cypher lock when it should have flagged the next door on the list, door 256. JE 279 at A406; JE 192 (Lt. Odorizzi's June 4, 1996 letter noting error). None of the junction boxes on the contract drawings, the source of power for the cypher locks, originally included an outlet into which the plug from the cypher lock could be inserted, so these junction boxes all had to be slightly modified. SE 232. On April 19, 1996, the Navy's engineers supplied a drawing to clarify how the cypher locks should be wired, and where the individual components should be installed in the door frame and nearby wall. SE 232. Three cypher locks were eventually deleted from the contract because Navy personnel

^{36/} A cypher lock includes a numbered keypad for code entry, and a controller box which sends electrical current to the door hardware to unlock the door if the correct code is entered. Tr. at 2639 (Lt. Odorizzi).

who were to be the end-users of the rooms did not wish to secure their doors with cypher locks. JE 192. The deletions and modifications of the work do not appear to have caused a net increase in labor or other costs to Sollitt. However, there was ample evidence that discussions of these clarifications to contract work occurred both in person during partnering sessions, as well as in writing; that clarification continued from April 10, 1996 through June 4, 1996; and that delays to the final work on Building 2B resulted from these discussions. SE 187; JE 192; Tr. at 590-99 (Mr. Zielinski).

The delay in cypher lock installation is chargeable to the Navy because there were minor, latent defects in the contract drawings and because deletions and modifications to the plans for installation continued during this delay period. Mr. Tipton's estimate of twenty-four calendar days of delay to the critical path is reasonable and is not contradicted by Mr. Dorn's chronology of the clarification discussions that occurred during April, May and June 1996. JE 382 at 55. Twenty-four calendar days of delay to the critical path of Phases II and III construction are chargeable to the Navy for the changes in the cypher lock installation.

7. Revisions to dampers in ventilation ducts

Sollitt alleges that critical path delays related to revisions in the smoke dampers³⁷ in ventilation ducts throughout Building 2B are chargeable to the Navy. Mr. Tipton estimated thirty-nine calendar days of critical path delays in June and July of 1996 related to the smoke damper revisions issue. JE 235 Issue 209. However, as discussed below, the revisions made to the smoke dampers resulted from contradictions in the contract drawings and specifications, a situation into which Sollitt should have inquired before commencing work.

Mr. Zielinski testified that Sollitt originally installed over thirty motorized smoke dampers throughout Building 2B. Tr. at 1034. The specifications and mechanical drawings indicated that the smoke dampers needed to be equipped with "actuators," which would close the smoke dampers in case of smoke, and automatically reset to open the dampers when smoke had cleared. GE 1019 ¶ 2.5.2; JE 279 (2B Drawings) at M303. However, no circuitry for these smoke damper actuators was shown on the electrical drawings for Building 2B, and no smoke damper connections were mentioned in the fire alarm system specifications. SE 254. Thus, the smoke dampers Sollitt installed had no power to operate and would not close in case of smoke. Mr. Maziarka admitted that he could recall no other construction project where Sollitt had installed inoperable smoke dampers. Tr. at 3295. After installing the inoperable smoke dampers, Sollitt proceeded with finish work and covered the ventilation ducts with drywall. Tr. at 2557 (Lt. Odorizzi). Sollitt did not alert the Navy to this problem until June 10, 1996, ten days after the original scheduled completion date for Building 2B. SE 254. The fix for the smoke dampers problem was provided by the Navy within nine days. *Id.* According to Mr.

^{37/} Smoke dampers are operable barriers within ventilation ducts consisting of metal blades or vanes which should close to prevent smoke from spreading throughout a building when smoke has been detected. Tr. at 604 (Mr. Zielinski); Tr. at 2567-68 (Lt. Odorizzi).

Tipton, critical path activities related to this issue continued into July 1996. JE 235 Issue 209.

There was obviously a conflict between the requirement for operable smoke dampers and the absence of any connection of these smoke dampers to the fire alarm system.³⁸ As Mr. Zielinski testified, Sollitt eventually perceived that the smoke dampers installation would not work and required substantial correction:

The only problem was that by these defective drawings that you [the Navy] gave me, there was no power to operate them, no sequence even if they had power. And later on, you guys created the sequence of operation which included stuff that wasn't in the specifications at all, not just the electrical but that further requirement of connecting them to the magnetically-held[-]open doors and fire alarm system.

Tr. at 1040. Not only had Sollitt not inquired before submitting its bid into the inconsistent contract terms which required smoke dampers but did not provide the wiring to close them in case of smoke, it installed inoperable smoke dampers and then covered them up with drywall. Sollitt did not fulfill its duty to inquire into contradictory terms in its construction contract. *See Triax Pacific, Inc. v. West*, 130 F.3d 1469, 1475 (Fed. Cir. 1997) (stating that because “the contradictory provisions in the contract were so apparent . . . [the plaintiff] had a duty to ask for clarification before bidding”); *Gelco Builders & Burjay Constr. Corp. v. United States*, 369 F.2d 992, 998-99 (Ct. Cl. 1966) (holding that apparent conflicts or irregularities in contract specifications trigger a duty for the contractor to ask for clarification). A reasonable contractor would not have read the contract to have required the installation of inoperable smoke dampers. A contractor’s unreasonable interpretation of contract specifications does not create a latent ambiguity that would be interpreted in favor of the contractor. *See Cmty. Heating & Plumbing Co. v. Kelso*, 987 F.2d 1575, 1578-79 & n.6 (Fed. Cir. 1993) (rejecting contractor’s claim based on an alleged latent ambiguity in contract terms because the contractor’s interpretation of contract provisions was unreasonable).

Because work on the smoke dampers installation continued into July 1996, the court finds that contract completion was delayed by this issue, as Sollitt has alleged. But the critical path delays related to the corrective work on the smoke dampers could have been avoided if Sollitt had fulfilled its duty to inquire into the contradictory contract terms before bidding or at least earlier in the construction schedule. Therefore, no critical path delays are chargeable to the Navy for the smoke dampers revisions.

8. Apportioning Critical Path Delays for Concurrent Delays of the Parties

^{38/} The absence of electric circuits to serve the smoke damper actuators has a possible explanation because either pneumatic *or* electric smoke damper actuators were permitted by the smoke damper specifications. GE 1019 ¶ 2.5.2.

Sollitt's Phases II and III construction delay claim is founded on seven separate allegedly delaying circumstances, discussed above. Sollitt's expert explained that the individual critical path delays related to these circumstances are not additive, or in other words, that the calendar days of delay attributed to each circumstance do not add up to a grand total, but rather, that these individual delays may be viewed as concurrent to the extent that the longest individual alleged delay is the maximum critical path delay that can be proved. Tr. at 1824 (Mr. Tipton) (explaining that the alleged delays were not "additive" and that Sollitt would be entitled at most to damages based on the duration of the longest single delay alleged); *see also* Sollitt Br. Ex. 2 (showing temporal overlap among the alleged delays chargeable to the Navy). The length of the single longest alleged critical path delay for Phases II and III construction, based on the updated analysis, was sixty-five calendar days for added access flooring.³⁹ JE 235 Issue 206. Although the court has little confidence in the analytical framework provided by Sollitt for its delay claim, particularly because it offers little specificity regarding the dates when construction activities actually occurred and little chance of precisely measuring overlaps between different but concurrent alleged critical path delays, the court is forced to adopt it for the limited purpose of setting an outer limit, sixty-five calendar days, to the government-caused delays that Sollitt is claiming for Phases II and III construction.

Mr. Tipton's testimony on the issue of concurrency of delays in this case explained that each delay, in his opinion, was independently sufficient to cause some delay to the critical path. *See* Tr. at 1824 ("[Delays would be considered concurrent] [s]imply [means] that the delay in one would not have effect with a delay in another area. In other words, if one instance had not happened, [and] another instance had, it still would have had that impact on the schedule."). But Mr. Tipton never explained the temporal relationships between the concurrent delays in a way that would assist the court in detecting temporal overlaps between these delays. The parties were unable to agree upon the meaning of a joint stipulation agreed to before trial, and therefore withdrew the stipulation, Tr. at 2234, concerning the import of Mr. Tipton's statement that, except for two of the seven individual delays described in his delay analysis, "the [five] delays would be considered concurrent so that each would have resulted in delays indicated to the contract completion date with or without other delaying events in the above list," JE 233 Tab 1. Since concurrency has both a temporal and a causal aspect, *see supra* note 8, Mr. Tipton's analysis of concurrency of delays in this case is incomplete. In addition, Mr. Tipton, unlike the court, found no delays chargeable to Sollitt in Phases II and III construction, JE 235 at 4, which limits the usefulness of his delay analysis and makes his overall findings less credible. *See Gulf Contracting, Inc.*, ASBCA Nos. 30195, 32839, 33867, 89-2 B.C.A. (CCH) ¶ 21,812 (Mar. 16, 1989) (rejecting

^{39/} This figure was variously reported to the court as eighty-one calendar days, Sollitt Br. Ex. 2, or sixty-five calendar days, JE 235 Issue 206 (Mr. Tipton's expert report). The discrepancy in these numbers is explained by Sollitt's use of two different contract completion dates, either June 17, 1996 or May 31, 1996, from which it measured the beginning of the delay experienced in completing the project. *Compare* JE 235 Issue 206 *with* Sollitt Br. Ex. 2. To prevent confusion, the court uses only one set of figures for Sollitt's estimates of critical path delays, those reported in detail in JE 235, Mr. Tipton's updated analysis.

a delay analysis because it “systematically excluded all delays and disruptions except those allegedly caused by the Government,” “was inherently biased,” and concluding that “[t]o be credible, a contractor’s CPM analysis ought to take into account, and give appropriate credit for all of the delays which were alleged to have occurred”), *aff’d on reconsideration*, 90-1 B.C.A. (CCH) ¶ 22,393 (Sept. 20, 1989), *aff’d*, 23 Cl. Ct. 525 (1991), *aff’d*, 972 F.2d 1353 (Fed. Cir.) (table), *cert. denied*, 506 U.S. 999 (1992).

Because the court found that among the seven circumstances concurrent delays should be charged to Sollitt and to the Navy, the court must now ascertain whether these concurrent delays, upon the record before the court, can be apportioned among the parties. To review, twenty-three calendar days for lead abatement, twenty-one calendar days for terrazzo floor fill and twenty-four calendar days for cypher locks are delays to the critical path chargeable to the Navy. None of these delaying events appear to overlap in time, because the lead abatement was completed in September 1995, the terrazzo floor fill delay started in March 1996 and was over by the first week of April 1996, and the delay in the cypher locks installation did not begin until April 10, 1996. If these were the only critical path delays to consider, the total of these delays, sixty-eight calendar days, would support Sollitt’s delay claim of sixty-five calendar days.

But Sollitt, too, was responsible for critical path delays, and these delays were concurrent with delays chargeable to the Navy. The black sand issue delays were caused by both Sollitt and the Navy, and were so intertwined and uncertain as to preclude a precise apportionment of those delays. The longest alleged delay, for added access flooring, was also caused by both Sollitt and the Navy, and that delay could not be apportioned with any certainty between the parties. And any critical path delays due to the revisions to the smoke dampers installation would be entirely chargeable to Sollitt. The quantity of delay days attributable to any of these issues was not established, but the court notes that Sollitt claimed fifty-seven delay days for the black sand issue and sixty-five days for added access flooring, and that Sollitt itself is responsible for some portion of those critical path delays. Sollitt also claimed thirty-nine delay days due to the smoke dampers installation, and all of the delay related to this issue is chargeable to Sollitt.

There appears to be little or no temporal overlap among the Sollitt-caused critical path delays. The black sand issue delays caused by Sollitt occurred primarily in October 1995. The Sollitt-caused delays related to added access flooring occurred between October 31, 1995 and February 6, 1996. The delays related to the smoke damper installation occurred during June and July 1996, and these were all caused by Sollitt. Because a substantial and non-overlapping amount of critical path delays caused by Sollitt affected Phases II and III construction, and because the court is unable to fairly apportion the delays to Phases II and III construction between the parties, Sollitt’s delay claim for Count I fails.

9. Validity of Liquidated Damages

For the late completion of Phases II and III construction, the Navy assessed liquidated damages in the amount of \$36,400 for the second and third floors of Building 2B, \$93,600 for the first floor of Building 2B; and \$15,600 for the exterior site work, Phase III, of the project, for a total of \$145,600.⁴⁰ SE 2015. Sollitt was responsible for some critical path delays affecting Phases II and III construction. But Sollitt has also proved that the Navy was responsible for delays here which, based on the credible analysis of this issue by Sollitt's expert, did affect critical path activities of Phases II and III construction. For this reason, and because the critical path delays cannot be apportioned between Sollitt and the Navy with any certainty, the assessment of liquidated damages for Phases II and III construction was not valid and \$145,600 must be returned to Sollitt.

II. Count II: Labor Cost Escalation

Sollitt's labor cost for carpenters and laborers increased an average of 3.64% per hour on June 1, 1996. JE 231 at 12. Because all phases of contract work were originally scheduled to have been completed by May 31, 1996, Sollitt claims that all of the increase in labor costs due to the raises effective June 1, 1996 is chargeable to the Navy, because delays in completion of the contract work were "attributable to [the] Navy." Sollitt Br. at 70. Sollitt claims \$11,678 for the additional labor expense caused solely by wage increases after May 31, 1996. *Id.*

According to the beneficial occupancy dates established by the record before the court, the contract work occurring after May 31, 1996 was work on the North Range Building, substantially completed on June 11, 1996; work on Building 2B, substantially completed by September 4, 1996; and exterior site work, also completed by September 4, 1996. SE 2015. As discussed in Count I, the delays of critical path activities in all of these areas were caused both by Sollitt and the Navy, and apportionment of delays affecting these activities is not possible on the trial record. Because Sollitt and the Navy were responsible for concurrent delays which pushed this work beyond May 31, 1996, and because Sollitt bore the burden of apportioning delays to support its claim for compensable delay, the court cannot award Sollitt its claimed costs for labor escalation.

III. Count IV: Cost of Temporary Enclosures and Heat

Sollitt claims \$115,122 for temporary enclosures and heat for the exterior masonry on Area C of Building 122 that took place during the winter months of 1995-96. Sollitt's burden is to prove that

^{40/} The contract's liquidated damages term, it should be noted, treated all of Phase II construction, that is all of Building 2B, as one project for which delays to substantial completion would trigger damages specified at a daily rate of \$3900. JE 23 (Pre-Award Amendment 0002). The Navy broke up the assessment of liquidated damages for this building into two-thirds for the upper two floors, and one-third for the first floor. SE 2015. The discrepancy between the Navy's assessment formula and the contract term is of no consequence to the court's analysis here, which voids any assessment of liquidated damages for Phases II and III construction.

this work would have been completed before the winter months but for unreasonable delays by the Navy, and that Sollitt incurred the claimed additional costs for temporary enclosures and heat as a result. If Sollitt was responsible for concurrent delays which also pushed the exterior masonry into the winter months, Sollitt would bear the burden of apportioning the delays caused by Sollitt and the Navy.

The exterior masonry was originally scheduled for September 12 through November 8, 1995. SE 569. Sollitt was able to establish at trial that the exterior masonry work on Area C of Building 122 was delayed. Tr. at 100-01 (Mr. Maziarka); *see* Tr. at 2158-59 (Mr. Tipton) (stating that the start of the exterior masonry had been delayed from September 12 to October 16, 1995); Tr. at 3149 (Mr. Dorn) (stating that the exterior masonry on Area C was delayed). This delayed start pushed at least part of the exterior masonry work on Area C into the winter months and thus, this work cost more to perform. Tr. at 104-05 (Mr. Maziarka); Tr. at 1395-96 (Mr. Zielinski) (stating that in the Chicago area during November or December the temperature would typically drop below thirty-two degrees Fahrenheit and would require temporary enclosures and heat for exterior masonry); Sollitt Facts ¶ 303 (plaintiff's assertion that exterior masonry on Area C was not completed until January 23, 1996); GE 1028 (defendant's estimate that exterior masonry on Area C was not completed until January 17, 1996). Sollitt established at trial that the costs claimed in Count IV were additional costs actually incurred because of the expense of performing masonry work in the wintertime, plus profit and bond premium markups. Tr. at 104-05 (Mr. Maziarka); SE 545 (cost proposal with underlying documents); JE 231 (DCAA audit at 14-15).

Sollitt did not prove, however, that the exterior masonry work on Area C was on schedule prior to alleged government delays. None of Sollitt's fact witnesses testified that the project was on schedule before the occurrence of alleged Navy delays. When plaintiff's counsel attempted to elicit such testimony at trial, Sollitt's project manager did not respond. Tr. at 517 (Mr. Zielinski). Instead, Sollitt relies on its baseline schedule, SE 569, and on general assertions by Mr. Strong and Mr. Maziarka that the baseline schedule was tight but feasible and that Sollitt could have completed the project on time:

Plaintiff's counsel: "Now, you were aware that the contract provided for completion within 460 days at the time the bid was put in, is that right?"

Mr. Strong: "Yeah."

Plaintiff's counsel: "And were you personally satisfied that Sollitt would be able to satisfy that contractual requirement?"

Mr. Strong: "Yes."

Plaintiff's counsel: "Was it a tight schedule?"

Mr. Strong: "Yes."

Tr. at 150-51.

Plaintiff's counsel: "Mr. Ma[ziarka, if it weren't for the Navy[-] caused delays that are the subject of your claims in the case, would Sollitt have completed the work under the contract by the original completion date?"

Mr. Maziarka: "Yes, we could."

Tr. at 3285-86.

Unrefuted and credible evidence established that at the beginning of the project Sollitt did not submit a timely baseline project schedule, Tr. at 1387-91 (Mr. Zielinski) (confirming that the contract required a baseline schedule by mid-March 1995 but that in May 1995 the Navy was still waiting for him to provide one), or a safety plan, *see* JE 382 at 100040 (safety plan not submitted and approved until May 9, 1995); Tr. at 3136-37 (Mr. Dorn) (same). Procurement of structural steel for Area C of Building 122 was behind schedule. *See* Tr. at 1488-96 (Mr. Zielinski) (acknowledging that letters from inspectors who visited Sollitt's steel fabricator weekly throughout September 1995 proved that steel pieces were not on site yet, despite an early August 1995 projected completion date for steel procurement); JE 382 at 95-99. Before the exterior masonry work could proceed on Area C, the foundation needed to be built and the structural steel needed to be erected. Tr. at 1406 (Mr. Zielinski). The November 8, 1995 scheduled completion date for the exterior masonry on Area C was speculative, not certain.

Even assuming that Sollitt's preparation was on schedule to begin the exterior masonry on Area C of Building 122 on September 12, 1995, Sollitt has not established what delays chargeable to the government specifically pushed back this projected start date. Sollitt, in its post-trial brief, vaguely refers to "the multitude of changes and changed conditions encountered on Building 122" as the cause of the delayed start of this work. Sollitt Br. ¶ 177. At trial, Sollitt's witnesses on the Count IV claim alluded to the differing site condition of an asbestos-laden steam tunnel in the footprint of Area C and a work stoppage due to a strike as delays to the exterior masonry work chargeable to the Navy.⁴¹ Tr. at 101-03 (Mr. Maziarka); Tr. at 1464 (Mr. Zielinski).

There is clear evidence in the record of the delay caused by the strike, which took place from August 29 through September 6, 1995, Tr. at 1481, which is further corroborated by the Navy's grant of a six calendar day time extension for the completion of Phase I construction. JE 73 (Modification P00041). There is also clear evidence that the steam tunnel asbestos removal held up work on Area C, although the extent of that delay was not firmly established. *Compare* JE 52 (Modification P00019)

^{41/} Mr. Maziarka made a passing reference to a third delay due to "miscellaneous work that we completed on [B]uilding 122, Area C," and Mr. Zielinski, on cross-examination, referred briefly to a two-or three-day delay due to the removal of soft soil from the footprint of Area C, Tr. at 1464, 1481, but these references were not otherwise supported or explained to the court and have not been accorded any weight.

(showing that the Navy granted a time extension of twenty calendar days to Phase I construction for this work) *with* JE 233 at Tab 3 (Mr. Tipton’s “Baseline” Report) (estimating a delay of fifteen calendar days based on contractor logs and other supporting material). Despite the availability of this evidence, Sollitt never attempted, at trial, in its expert report or in its post-trial brief, to establish how many days of Navy-caused delay were responsible for the late start of the exterior masonry.

By July 21, 1995, when the asbestos abatement had been completed and the bulk of the Navy-caused delays alleged to have affected the exterior masonry work on Area C had been experienced, JE 233 at Tab 3, Sollitt was projecting in its CPM update a September 18, 1995 start date for the exterior masonry, and an estimated completion date of Nov. 14, 1995, GE 1034; Tr. at 1440-41 (Mr. Zielinski). This is a difference of one week from the baseline schedule for this work.⁴² When another week is added for the strike, the exterior masonry could have been delayed two weeks by the Navy-caused delays. Sollitt introduced no evidence of when winter weather arrived in the Chicago area in 1995. Based on the record before the court, plaintiff has not met its burden to prove that unreasonable delays by the Navy pushed the exterior masonry work on Area C of Building 122 into the winter months.

Even if Sollitt had proved that unreasonable delays by the Navy pushed the exterior masonry work on Area C into the winter months, Sollitt has not proved that the Navy-caused delays were the sole proximate cause of the delayed start to this work. Contemporaneous documents show a delay of at least one and a half months in Sollitt’s procurement of structural steel, JE 382 at 95-99, which also would have delayed the exterior masonry work on Area C.⁴³ Sollitt bears the burden of apportioning any concurrent delays to prove its claim. Sollitt has not apportioned the delays affecting the exterior masonry work on Area C, and the record before the court lacks the specificity and certainty which would make apportionment feasible.

^{42/} One possible explanation for the difference between a delay of one week versus a delay of either fifteen or twenty calendar days, is that the delay caused by the asbestos removal may have had a greater effect on other follow-on activities than it had on the exterior masonry. *See* Tr. at 1468-69 (Mr. Zielinski) (explaining that foundation and steel work were not held up by the asbestos removal, although “slab on grades” were delayed). Another explanation could be that the updated CPM schedule was inaccurate in its estimates of start and completion dates.

^{43/} Although some changes to the steel used in the ship’s trainer were being ordered by the Navy in late August 1995, *see* JE 126 at 4, 13 (Amendment 14), the delayed structural steel procurement that impacted the exterior masonry is chargeable to Sollitt alone, based on a review of the steel inspection reports, JE 382 at 90-99, and the testimony of all witnesses and experts who discussed the changes to the ship’s trainer. *See* Count I, Section A-1. There was no testimony or documentary evidence from which it could be inferred that changes to the ship’s trainer delayed the exterior masonry on Area C.

For these reasons, Sollitt may not recover for its claims of additional expenses for the exterior masonry on Area C of Building 122 performed during the winter months.

IV. Count V: Overtime Premium Pay

Sollitt claims that it expended \$148,387 in overtime premium pay; that this overtime work was authorized by the Navy; and that the Navy now owes Sollitt \$118,458, the balance due because the Navy only paid Sollitt \$29,929 for overtime costs. Defendant argues that the authorization for overtime work was limited in scope and that Sollitt's current claim is for overtime work that was not authorized. The parties principally dispute whether Sollitt was authorized to continue working Saturdays after January 20, 1996. An additional concern for the court is whether Sollitt was paid the correct amount for overtime worked from October 21, 1995 through January 20, 1996.

In mid-October 1995, Cdr. Walters, the NTC Resident Officer in Charge of Construction (ROICC), authorized Sollitt to begin working overtime. Tr. at 2452 (Lt. Odorizzi). This authorization was limited in scope in several respects. First, the purpose of the overtime work was to bring critical path activities back on schedule, or at least to reduce delays in project completion. GE 1063 (Stipulation of Cdr. Vernon Walters). Second, the Navy exercised control over both the activities scheduled for Saturday work and the number of workers who would work that day. See GE 1007 (Navy annotated copy of Sollitt December 7, 1995 facsimile proposing overtime for December 8, 1995); Tr. at 2459-60 (Lt. Odorizzi) (recalling in that particular instance, that he had denied Sollitt permission for roofers to work overtime and had limited overtime work to critical path activities on Building 122). Third, there was a procedure in place to approve each Saturday of overtime work beforehand, in which Sollitt would specifically propose construction activities and workers for those activities by Friday afternoon and the Navy would then approve all or part of the overtime request before work began that Saturday. Tr. at 652-57 (Mr. Zielinski); Tr. at 2454-60 (Lt. Odorizzi).

Even with overtime work, however, Sollitt was not able to reduce the predicted delays to project completion. Tr. at 2467 (Lt. Odorizzi). The Navy withdrew its authorization for any further overtime reimbursement beyond January 20, 1996. *Id.* The Navy requested in the January 31, 1996 partnering meeting that Sollitt submit all of its outstanding overtime cost proposals (CXs) for the period October 21, 1995 to January 20, 1996, about half of which were outstanding. *Id.*; GE 1052. In February 1996, Sollitt cleared this backlog and submitted overtime CXs for Saturdays in November and December 1995 and for three Saturdays in January 1996 ending with Saturday, January 20, 1996. SE 543. At the February 28, 1996 partnering meeting the submission of overtime cost proposals agenda item was marked CLOSED. GE 1053. Once the Navy had all of Sollitt's cost proposals for the authorized overtime, the NTC ROICC put in a request for funding to pay for these cost proposals on February 29, 1996.

Sollitt continued to incur overtime expenses after January 20, 1996, when it used workers on some Saturdays through June 1996. SE 543. There is no indication, however, that this overtime was

authorized as an added contract expense by the Navy. There is no documentary evidence in the record of Sollitt preparing weekly proposals to work on those Saturdays, nor is there documentary evidence of the Navy receiving or approving such requests. Sollitt stopped submitting cost proposals to the Navy for overtime on February 23, 1996 (when the CX for January 20, 1996 was submitted), and did not resume submitting overtime cost proposals to the Navy until August 22, 1996. *Id.* Because the Navy did not authorize overtime after January 20, 1996 and is not liable for overtime costs after this date, Sollitt cannot recover the costs of overtime worked after January 20, 1996.⁴⁴

Sollitt does not indicate how much of its claim in Count V is related to overtime performed after January 20, 1996, and how much might be attributed to authorized overtime from October 21, 1995 through January 20, 1996, for which the Navy paid \$29,929. Sollitt did not present the court with the overtime CXs for October 21, 1995 through January 20, 1996, but it did present a detailed spreadsheet summary of the overtime expenditures for this period. SE 543. It appears from this document that Sollitt may have expended about \$70,000 on overtime for this period and billed the

^{44/} Sollitt did not argue, in the alternative, that the overtime expenses incurred after January 20, 1996, if found not to have been authorized, would be chargeable to the Navy under a theory of constructive acceleration of contract performance. Sollitt would bear the burden of proving constructive acceleration, *Fraser Constr. Co. v. United States*, 384 F.3d 1354, 1361 (Fed. Cir. 2004), and it has not met this burden. The Federal Circuit recently described the elements of constructive acceleration:

Although different formulations have been used in setting forth the elements of constructive acceleration, the requirements are generally described to include the following elements, each of which must be proved by the contractor: (1) that the contractor encountered a delay that is excusable under the contract; (2) that the contractor made a timely and sufficient request for an extension of the contract schedule; (3) that the government denied the contractor's request for an extension or failed to act on it within a reasonable time; (4) that the government insisted on completion of the contract within a period shorter than the period to which the contractor would be entitled by taking into account the period of excusable delay, after which the contractor notified the government that it regarded the alleged order to accelerate as a constructive change in the contract; and (5) that the contractor was required to expend extra resources to compensate for the lost time and remain on schedule.

Id.

Navy for a somewhat larger figure, including markups for overhead, profit and bond premium.⁴⁵ *Id.*; SE 547 (damages summary of CXs showing that \$78,499 was requested for overtime for this period); JE 205 (Navy letter to Sollitt referring to overtime cost proposals for the period ending January 20, 1996, “the sum of [which] exceed \$75,000”); JE 383A at 283 (Navy file document dated September 24, 1997 stating that Sollitt requested \$78,111 for overtime expenses for this period). Even though the amount of Sollitt’s claim for overtime costs for October 21, 1995 through January 20, 1996 was not clearly stated by Sollitt at trial or in its post-trial brief, the court finds that Sollitt’s claims total approximately \$75,000 for this period. *See* Sollitt Br. ¶ 185 (stating that “premium time of approximately \$75,000 was billed February 23, 1996”).

Mr. Zielinski testified that Sollitt’s CX proposals for overtime expenses were accurate representations of payments to Sollitt’s subcontractors, Tr. at 647, and that Sollitt summary records of the CX proposals for this period (SE 543 and SE 547) were documents summarizing the CXs submitted to the Navy, Tr. at 640-41. The DCAA audit found that the total overtime expenses claimed in SE 543 were actually expended. JE 231. The court finds that Sollitt did expend approximately \$75,000 for overtime from October 21, 1995 through January 20, 1996. The Navy paid only \$29,939 for overtime costs during this period. JE 87 (Modification P00055 of April 28, 1999, at 6).

There are several possible explanations for the discrepancy between the Navy’s payment and Sollitt’s cost proposals for overtime for this period. Overtime premium rates for Sollitt’s subcontractors were sometimes disputed by the Navy. Tr. at 639 (Mr. Zielinski). There were also occasions when Sollitt’s estimate of costs in its overtime request was much less than the actual cost proposal submitted afterward. *Compare* GE 1009 at 4 (estimating overtime costs of \$3000-\$4000 dollars for 23 workers, only 18 of whom were approved by the Navy to work January 6, 1996) *with* SE 547 (showing that CX 154 for January 6, 1996 requested payment for overtime costs of \$8350). There also were disputes over what portion of Sollitt’s expenses should be chargeable to the Navy. *Compare* JE 383A at 284 (stating the Navy’s view that the agreement provided that the Navy would only pay the “premium” portion of overtime wages, i.e., the “and a half” portion of “time and a half,” and also its understanding that Sollitt could not mark up its costs for profit and overhead) *with* SE 543 (marking up overtime expenditures for profit and overhead). The Navy also refused to pay for Sollitt expenses that were not substantiated by “certified payrolls.” JE 383 at 285. The Navy provided detailed justification for the payment it authorized, and the costs it disallowed, for each of the thirteen Saturdays worked from October 21, 1995 through January 20, 1996. *Id.* at 285-88. Sollitt merely provided a summary of payments to subcontractors and its own labor costs, SE 543; SE 547, which were not proved to be payments for which the Navy must reimburse Sollitt.

The Navy’s documentation backing up its payment of \$29,939 for the overtime worked from

^{45/} The spreadsheet marked SE 543 is dated July 21, 1999, and is a summary of documents not before the court. It may or may not reflect exactly what was submitted to the Navy in January and February 1996.

October 21, 1995 to January 20, 1996 showed that reasonable calculations and decisions supported this figure. It also appears that Sollitt may have expended more on overtime than the Navy authorized. *See* Tr. at 687 (Mr. Zielinski) (stating that “[i]f the [Navy] never called me back [to approve overtime for that Saturday], I’d work these guys anyway”). In any case, Sollitt did not meet its burden to prove that the Navy was liable for any of the difference between \$29,939 and \$75,000, because Sollitt did not prove that \$75,000 was the reasonable cost for the overtime the Navy authorized. For these reasons, Sollitt may not recover additional monies for overtime expenditures.

V. Count VI: Balance of Cost of Added Fill for Bathroom Floors

Sollitt claims it is owed \$809 for the addition of fill to certain bathroom floors in Building 122. Sollitt Br. at 75. Defendant contends that Sollitt was adequately compensated for the additional fill work. There is no real dispute that the Navy was liable for payment for the addition of fill to the bathroom floors. *See* Tr. at 697 (Mr. Zielinski) (describing soft spots in the subfloor that were discovered when the existing floor was removed); Tr. at 1066 (Mr. Zielinski) (stating that the deteriorated subfloors were impossible to see during inspection because they were covered over); Tr. at 2482 (Lt. Odorizzi) (stating that “the only objection that the government took to the contractor’s [cost of adding fill] proposal at the time was his profit percentage”); JE 77 (Modification P00045) (authorizing an equitable adjustment because of the need for additional fill after demolition of existing bathroom floors, under the Changes clause). The court agrees with the contracting officer’s contemporaneous determination that the Navy was liable for an equitable adjustment for the additional fill work in Building 122 bathrooms, under either the Changes clause or the Differing Site Conditions clause.

Sollitt asserts that it was entitled to be paid its claimed costs for the additional fill work, \$3859.18 paid to a subcontractor plus markups for overhead, bond premium and profit, totalling \$4363. The Navy paid only \$3554. JE 77. Lt. Odorizzi reported that the Navy paid less than the amount claimed by Sollitt because of a dispute over profit markup, Tr. at 2481, and defendant stated that the Navy wanted to pay for Sollitt’s profit at 7% rather than 7.36%, Def.’s Mem. at 52. Defendant, however, has since stipulated that Sollitt is entitled to a 7.36% profit markup on subcontractor payments that are otherwise justified. SE 2007 at 1. The 7.36% profit markup was therefore reasonable. No other evidence was presented of a government challenge to Sollitt’s costs for the addition of fill to the bathroom floors. The court finds that Sollitt’s payment to its subcontractor was reasonable for the work performed, and that this cost, as marked up by the stipulated percentages for overhead, bond premium and profit, is the correct measure for this added contract work. Because the Navy paid \$809 less than the correct amount, Sollitt is awarded \$809 for Count VI.

VI. Count VII: Balance of Cost of Stabilization of Sand Under Building 2B

This claim by Sollitt is related to the work discussed in Count I, Section B-3. The Navy unilaterally modified the contract to add \$47,550 for the added work required by the differing site

condition of black sand behind the south foundation wall of Building 2B. Defendant does not contest Sollitt's entitlement to payment for this work added to the contract. Sollitt contends that its cost to perform the added work exceeds what the Navy paid. Sollitt originally claimed and still claims that \$123,781 is the reasonable cost for the work, Sollitt Br. ¶¶ 192-93, 196, and because the Navy paid only \$47,550 Sollitt now claims an unpaid balance of \$76,231.

Two types of proof were offered at trial. Sollitt relied on its original cost proposal, which was submitted after the actual construction and was dated September 18, 1996. SE 297; SE 2001. Mr. Strong testified that these costs were "reasonable and necessary" and that "such labor and material costs represent the reasonable and customary costs for such items in the industry."⁴⁶ Mr. Strong gave a detailed explanation of how Sollitt credited to the Navy the cost of building the foundation wall as originally designed. Tr. at 469-74. The DCAA audit found that, in general, the claimed costs for this and other unilateral modifications were actually expended. JE 231 at 2, 16-17. The great majority of the items and calculations underlying Sollitt's cost proposal CX 39 appeared to the court to be credible.

Defendant relied principally on the testimony of Lt. Odorizzi, who disagreed with the quantities of some of the labor and materials that Sollitt claimed in its cost proposal, both on the "credit" side for the original work and the "add" side for the changed work. Tr. at 2528-30, 2534-35, 2539-56. His testimony was based, at least in part, on calculations he performed in September 1997. Tr. at 2538, JE 383A at 002-030. Lt. Odorizzi pointed out in one example that his revision of a quantity benefitted Sollitt, Tr. at 2543, and in another example his revision benefitted the Navy, Tr. at 2541-42. Both Mr. Strong and Lt. Odorizzi testified that in one respect, the changed work was actually easier than the originally planned construction. Tr. at 472-73, 3528-30.

Lt. Odorizzi's calculations produced the figure which was eventually paid by the Navy – \$47,550. Tr. at 2952-55. Lt. Odorizzi characterized this figure alternatively as a negotiating objective, "[t]he government objective, which isn't quite the same as an estimate, I guess," Tr. at 2956, or as "both . . . a reasonable cost for the work performed [and] [o]ur objective," Tr. at 2957. It appears to the court that the "objective" was designed to be a starting point for negotiations. *See* Tr. at 2957 (Lt. Odorizzi) ("[I]f there was a flaw in our logic, hopefully the contractor would bring that to our attention during negotiations."). Lt. Odorizzi also suggested that his figures might have been more accurate if Sollitt had provided, as requested, some as-built drawings to reflect the minor modifications Sollitt had made to the design embodied in the sketch provided by the Navy. Tr. at 2539.

⁴⁶/ Mr. Strong's testimony was by stipulation of the parties – the court has no reason to doubt that Mr. Strong would have stated for the record that the cost proposal submitted by Sollitt was accurate and reasonable, because he had so testified repeatedly on other issues during trial, and for this issue he had provided a comprehensive and credible foundation when questioned regarding the underlying documents supporting Sollitt's cost proposal. Tr. at 469-74, 3316; SE 2001; SE 2026.

Lt. Odorizzi's testimony showed that he did not have extensive professional experience estimating construction jobs, Tr. at 2936-37, that his calculations were further removed in time from the work than those performed by Sollitt, Tr. at 2937, and that the revisions he had made to the quantities used in the cost proposal provided by Sollitt were not always accurate, Tr. at 2987. When questioned about his deduction of all hand excavation labor costs for the revised foundation wall construction, his answer that the work could have been done with equipment instead was not credible. Tr. at 2962-71. Sollitt's evidence of cost was generally more convincing than the revisions made to Sollitt's figures by Lt. Odorizzi, therefore Sollitt's estimate of an unpaid balance of \$76,231 is deemed by the court to be a reasonable and valid claim, with only limited adjustments deemed necessary.

There are two adjustments to be made to Sollitt's proposed unpaid balance for the extra work caused by the black sand. First, as defendant pointed out at trial, Sollitt included a line item in CX 39 for labor provided by its quality control manager, whose services constitute a fixed cost throughout the project and thus cannot be allocated to a particular aspect of the construction. Tr. at 3061. This testimony was uncontroverted. Therefore, the line item for \$3000, as adjusted for profit, overhead and bond premium markups, must be deducted from Sollitt's claim. Second, the court reviewed Sollitt's "credit" and "add" cost calculations and discovered a 0.65% markup to total materials used, but this markup was found *only* on the "add" cost calculation. This markup was not explained to the court, although it closely resembles Sollitt's bond premium markup of 0.62% on contemporaneous documents such as CX 39, *see* SE 297, and the bond premium markup of 0.67% stipulated by the parties, *see* SE 2007 at 1. Because this markup was not found in both the "add" and "credit" materials cost totals, this unexplained markup of \$258 dollars, as adjusted for profit, overhead and bond premium, must also be deducted from Sollitt's claim.

These two deductions, employing the markups used in CX 39,⁴⁷ are calculated as follows:

Quality control manager overcharge	\$3000
Overhead markup on \$3000 ($\$3000 \times 3\%$)	\$ 90
Profit markup on \$3000 ($\$3000 \times 7.36\%$)	\$ 221
Subtotal	\$3311
Bond premium markup on \$3311 ($\$3311 \times 0.62\%$)	\$ 21
QUALITY CONTROL MANAGER OVERCHARGE	

^{47/} Although the bond premium markup is written as .062% in CX 39, a typographical error in the court's opinion, the actual percentage used in the calculations supporting the proposed sum of \$123,781 in CX 39 was 0.62%, *see* SE 297. Thus, 0.62% is the percentage used by the court. The court also notes that the parties have stipulated to certain markups to which Sollitt is entitled for subcontractor claims, including 7.36% for profit and 0.67% for bond premium. SE 2007 at 1. Here, the court will use the 0.62% bond premium markup to correct the overcharges in CX 39, not 0.67%, because CX 39 used the 0.62% bond premium markup and because Sollitt continues to assert that the figures in CX 39 are "reasonable." *See* Sollitt Br. ¶ 193.

WITH MARKUPS	\$3332
Unexplained markup overcharge	\$ 258
Overhead markup on \$258 (\$258 X 3%)	\$ 8
Profit markup on \$258 (\$258 X 7.36%)	\$ 19
Subtotal	\$ 285
Bond premium markup on \$285 (\$285 X 0.62%)	\$ 2
UNEXPLAINED MARKUP OVERCHARGE	
WITH MARKUPS	\$ 287
TOTAL overcharges with markups in CX 39	\$3619

Sollitt's unpaid balance claim in Count VII is \$76,231. When \$3619 is subtracted from \$76,231, the unpaid balance claim is reduced to \$72,612. Sollitt is awarded \$72,612 on Count VII of its complaint.

VII. Count VIII: Balance of Cost of Removal of Interior Face of Walls

The Navy directed Sollitt to remove the interior clay tile surface of some of the exterior walls in Building 2B and unilaterally modified the contract to pay Sollitt \$19,010 for this change to contract work. Sollitt Br. ¶ 197; JE 78 (Modification P00046). Sollitt claims that it was underpaid for this demolition work. The Navy argues that Sollitt's claimed costs of \$36,695 are not justified.

Sollitt's witnesses described the demolition work undertaken based on this contract modification. Tr. at 318-20 (Mr. Strong), 718-19 (Mr. Zielinski). The parties have stipulated that Sollitt paid its subcontractor \$32,335. SE 2007 at 2. Lt. Odorizzi testified that the number of hours of labor required for this work were disputed and that no agreement was ultimately reached on this issue. Tr. at 2485-86. Lt. Odorizzi did not personally conduct a field audit as to the appropriate amount of labor required. *Id.* The DCAA audit confirmed that, in general, payments made to subcontractors were actually incurred. JE 231 at 2, 16-17. The court finds that Sollitt's payment of \$32,335 to its subcontractor for this work was reasonable. When stipulated costs for overhead, profit and bond premium are added, SE 2007 at 1. Sollitt is entitled to \$36,575 for the reasonable value of this work. Because Sollitt was paid only \$19,010, Sollitt is awarded \$17,565 for Count VIII.⁴⁸

VIII Count IX: Balance of Cost of Curb Inlet

The Navy added work to the contract for a Building 2B parking area curb inlet to the storm

^{48/} Although the court calculated this amount using Sollitt's stipulated subcontractor payment and the stipulated markups, this amount is slightly lower than plaintiff's figure of \$17,685, perhaps due to a calculation error by plaintiff.

drainage system. Sollitt Br. at 79; JE 64 (Modification P00031). The work included a change in elevation of nearby pavement, installation of the curb inlet, creation of a slope in surrounding pavement toward the drain, and excavation for and installation of an eight-inch PVC pipe drain line. JE 64. Sollitt submitted a cost proposal for \$6414 for this work on June 27, 1996. Sollitt Facts ¶ 328. Defendant does not deny its liability for this change to the contract, but does argue that Sollitt's cost proposal is excessive, because it "includes work that [Sollitt] was required to do under the terms of the contract." Def.'s Br. at 28. Defendant's allegation that excessive costs were included in Sollitt's cost proposal was not substantiated by any testimony or documentary evidence.

The Navy paid Sollitt \$3394 for the curb inlet work. JE 64; JE 87 (Modification P00055). The Navy has stipulated that Sollitt paid its subcontractor \$4188 for work on the curb inlet, and that justified subcontractor payments are entitled to stipulated markups for overhead, bond premium and profit. SE 2007 at 1-2. Sollitt also expended labor and materials of its own on the curb inlet. Sollitt Mem. ¶ 329. Sollitt's cost proposal of \$6414 was reasonable, and reflects amounts actually expended on this work, as confirmed by the DCAA audit, JE 231 at 4, 16-17. Sollitt is awarded an equitable adjustment of \$3020 for the unpaid portion of its curb inlet work.

IX Count X: Balance of Cost of Revisions to Electrical Plans

Sollitt alleges that Amendment 19 changed electrical work on the ship's trainer in Area C and that its CX 174 appropriately requested \$7691 for the added work. Sollitt Br. at 80. Testimony at trial, Tr. at 719-20 (Mr. Zielinski), and the parties' stipulation to a \$6803 payment to a subcontractor for this work, support Sollitt's claim. Lt. Odorizzi testified that Amendment 19 was not an extensive change that would cause this great of an addition to bid-based contract work. Tr. at 2487-91. The Navy paid \$793 for work described in CX 174, as shown by a \$971 payment in Modification P00029, JE 62, and a \$178 deduction in Modification P00055, JE 87. The court, however, notes that the government estimate of cost documented in the unilateral modifications concerning Amendment 19 appears to be a negotiating figure, not a perfectly accurate cost estimate. *See* JE 383A at 226 (facsimile cover sheet regarding Amendment 19 with handwritten notes from Lt. Corsello, the contracting officer, to division headquarters) ("Gov't Est[imate] = \$1200. We [had] better reserve \$5000."). For this claim, plaintiff's estimate of the cost of work added to the contract is better supported by the evidence before the court and is reasonable. Sollitt is awarded \$6898, the unpaid balance for this work included in Amendment 19.

X. Count XI: Balance of Cost of Revisions to Relief Air Plans

After the HVAC system had been installed and most of the renovation of Building 122 Areas A and B was complete, a design flaw was discovered in the ventilation system. SE 144. The Navy added \$47,439 to the contract pursuant to the Changes clause for work to correct the problem, which included adding ductwork and dampers, and adjusting airflow in the building. JE 56 (Modification P00026). Sollitt submitted a cost proposal for the work totaling \$16,743. SE 163. After the work

was completed, Sollitt submitted a revised cost proposal for \$17,358. The Navy eventually modified its change order for the relief air work, which reduced the payment amount for this work to the \$16,743 that Sollitt had originally proposed. JE 80 (Modification P00048). Sollitt now seeks \$615, the unpaid portion of its revised cost proposal.

The court finds that the Navy was liable for this change to the contract, because its ventilation design was faulty and required substantial corrective work. Defendant does not contest the Navy's liability for the changed contract work, but claims it paid a "fair and reasonable" price for the added work. Def.'s Br. at 30. Mr. Zielinski explained that Sollitt's charge for its subcontractor's work remained the same in the revised cost proposal, but that Sollitt's expenses increased, such as when it had to rent a lift to access some of the work areas. Tr. at 567-68. Sollitt's expenses for this work were confirmed by the DCAA audit, SE 231 at 4, 16-17, and are reasonable. Sollitt is awarded \$615 for the unpaid portion of its work to fix the design flaw in the HVAC system in Building 122 Areas A and B.

XI. Count XII: Balance of Cost of Revisions to Damper Plans

As the court found in Count I Section B-7, Sollitt should have inquired into the contradictory contract terms affecting operable smoke dampers in the ventilation ducts in Building 2B before installing inoperable smoke dampers. Therefore, any costs associated with removing inoperable smoke dampers or restoring damage to drywall occasioned by this removal are not recoverable by Sollitt. The only remaining costs in Sollitt's claim regarding smoke dampers are for work done to complete the smoke dampers installation, as modified by the Navy. The Navy contends that any work done to install operable smoke dampers was part of the original contract, and that modifications to the smoke dampers resulted in a net decrease of contract costs for Sollitt. In light of the evidence presented at trial, the Navy's argument is persuasive.

Sollitt's reading of the original contract is that Sollitt was instructed to install thirty-eight inoperable smoke dampers. Tr. at 1034 (Mr. Zielinski). This reading of the contract is unreasonable. Not only does this reading defy common sense, but it would negate the smoke damper specification requiring the smoke dampers to close in the case of smoke, and to reopen when the smoke had cleared. GE 1019 ¶ 2.5.2. Reading the contract as a whole, the necessity of functioning smoke dampers is apparent and the contractor should have resolved the power and fire alarm system connection problems before proceeding with the smoke damper installation. "An interpretation that gives meaning to all parts of the contract is to be preferred over one that leaves a portion of the contract useless, inexplicable, void, or superfluous." *NVT Techs.*, 370 F.3d at 1159 (citing *Gould, Inc. v. United States*, 935 F.2d 1271, 1274 (Fed. Cir. 1991)). The court must conclude that the contract as bid included operable smoke dampers at the locations indicated on the mechanical drawings.

Mr. Zielinski testified that thirty-eight inoperable smoke dampers were installed. Tr. at 1034.

The modification of the smoke damper contract work deleted as many as twenty-four smoke dampers and the connections they would have required to the power and fire alarm system. *Id.*; Def.'s Br. at 31; *see also* JE 80 (Modification P00048) (mandating the removal of eleven installed inoperable smoke dampers). The modification of the work also mandated the connection of fourteen smoke dampers to the power and fire alarm system. JE 80. The court finds that the modified smoke dampers installation is a net decrease in contract work from the contract work as bid. Therefore, Sollitt cannot recover additional compensation for the revisions to smoke dampers in Building 2B.

XII. Count XIII: Balance of Costs for Modified Steel Plates

Sollitt seeks \$293 for the unpaid portion of its cost proposal CX 211, allegedly submitted on September 11, 1996, which ostensibly detailed costs for fabricating and installing "certain steel plates." Sollitt Br. at 83-84. Sollitt presented no evidence to justify this claim. CX 211 was not entered into evidence as an exhibit, and although Sollitt referred to SE 302 for data related to CX 211 in its post-trial brief, SE 302 is actually CX 332 and deals with another subject matter entirely. None of Sollitt's witnesses testified as to the reasonableness of the costs in CX 211, or, for that matter, as to what the changed work regarding "certain steel plates" entailed. Lt. Odorizzi testified that the Navy paid a "reasonable cost" for this changed work, Tr. at 2495, and his testimony is entirely uncontroverted. Sollitt bears the burden of proving the reasonableness of costs for changed work for which it seeks an equitable adjustment, and has not met that burden in this instance. Sollitt is awarded nothing for Count XIII.

XIII. Count XIV: Reimbursement for Unilateral Deductions

Sollitt seeks reimbursement for four unilateral deductions the Navy made to the contract price for four work items that were deleted from the contract. These deductions total \$7625 and are best addressed separately by their proposed change order (PCO) numbers, because there is no common thread linking them, other than that they were all included in Modification P00055 signed on April 28, 1999, JE 87. The Navy bears the burden of proving the value of the work deducted. *Nager*, 442 F.2d at 946. As discussed below, Sollitt is entitled to \$726 for the deduction imposed for PCO 79, and \$1312 for the deduction imposed for PCO 88, and is awarded a total of \$2038 for Count XIV.

A. PCO 79: Not painting three mechanical rooms in Building 2B

The Navy decided that "[i]t d[id] not make any sense to paint [the] walls" in three mechanical rooms in Building 2B. JE 383B Tab PCO 79 (Lt. Odorizzi letter of October 1, 1997). Sollitt agreed that a credit was due the Navy, but the parties disputed the square footage of the rooms and the amount of painting costs saved by the deleted work. JE 383B Tab PCO 79 (Sollitt's CX 235 of May 13, 1996) (proposing a credit of \$1682); Tr. at 2709 (Lt. Odorizzi) (stating that his analysis of October 1997 suggested a credit of \$2408). The Navy deducted \$2408 from the contract price for this issue. JE 87.

There was documentation in the record to support both figures. The court notes that Sollitt's credit estimate was contemporaneous with the decision to delete the work from the contract, and was based on a subcontractor's estimate. JE 383B Tab PCO 79. The Navy's estimate was created over a year later, and was based on estimating formulas. *Id.* The court finds Sollitt's credit figure to be more credible, and awards Sollitt \$726 for the Navy's incorrect deduction for PCO 79. This award represents the difference between \$1682, the value of the deducted work, and the Navy's deduction of \$2408 in Modification P00055.

B. PCO 84: Not painting a plywood barricade at a loading dock

In the summer of 1995, Sollitt and the Navy signed Modification P00003, which substituted a plywood barricade for a section of chain-link fencing at the edge of an existing loading dock, to prevent unauthorized access to the construction site. JE 36. The parties added \$4952 to the contract price for this work, which included painting the barricade "a suitable color to match the required construction fencing." *Id.* Sollitt never painted this barricade, and the Navy deducted exactly the amount that Modification P00003 had added to the contract price for the painting portion of the barricade work. JE 383B Tab PCO 84 (showing the June 1995 cost breakdown for Modification P00003, including the cost of the painting portion of the barricade work); JE 87 (Modification P00055) (deducting \$2538 for PCO 84, exactly the amount that was in the cost breakdown developed for Modification P00003 for the painting portion of the barricade work). Because the Navy deducted the same amount that it had previously added for changed work that Sollitt did not perform, the Navy's deduction was reasonable. Sollitt is not entitled to any reimbursement for the Navy's unilateral deduction for PCO 84.

C. PCO 88: Not installing three cypher locks

The cypher locks issue was extensively discussed in Count I Section B-6 and is further discussed in Count XV Section M. Although the court has found that there was no net increase in Sollitt's costs caused by the clarification of the cypher lock installation and the deduction of the installation of three cypher locks from the contract work, it is impossible to discern from the evidence before the court the amount of a credit due the Navy for this issue. This is partly due to the confusing mix of added and deleted work: Sollitt had to add duplex outlets in junction boxes for plugging in ten cypher locks, but did not have to install three cypher locks. JE 382 at 100188; SE 363; JE 383B Tab PCO 88. No comparison of the relative costs involved in these changes has been provided to the court. The Navy has failed to meet its burden of proof for its unilateral deduction for PCO 88. All of the \$1312 deducted from the contract price in Modification P00055 for cypher locks not installed is awarded to Sollitt.

D. PCO 95: Substituting 4-inch conduit for 6-inch conduit on transformers

Sollitt requested a variance on some of the conduit serving transformers for Buildings 122 and

2B. JE 383B Tab PCO 95. The change in conduit size was approved by the Navy. *Id.* The smaller conduit cost less and Sollitt's subcontractor submitted an estimate of cost savings. *Id.* The Navy deducted the cost savings amount estimated by Sollitt's subcontractor, plus markups for overhead, profit and bond premium. *Id.* The deduction was substantiated and was reasonable. Sollitt is not entitled to any reimbursement for the unilateral deduction for PCO 95.

XIV. Count XV: Balance Due on Proposed Change Requests

A. CX 18: Lead Paint Abatement (Building 2B)

As described in Count I Section B-1, Sollitt encountered a differing site condition when hazardous amounts of lead were found throughout Building 2B. Sollitt is thus entitled to an equitable adjustment for the reasonable costs of lead abatement. Sollitt paid its subcontractor \$130,000, and its attorneys \$8460 to litigate that price rather than a higher sum initially invoiced. SE 2007 at 1, 3; Sollitt Br. ¶ 100. The Navy has stipulated that the subcontractor was paid "the fair market value" for lead abatement. SE 2007 ¶ 4. The Navy has also stipulated to overhead, profit and bond premium costs. *Id.* ¶ 1. Sollitt's payment for lead abatement of \$138,460, when increased by stipulated markups, totals \$156,616.⁴⁹ Sollitt is awarded \$156,616 for CX 18.

B. CX 47: Extra Work to Complete Water Connection for Architect's Trailer

In Modification P00004 Sollitt agreed to a number of contract changes, including the addition of a "ConRep field office" or architect's trailer, and for all of these changes \$96,158 was added to the contract price. JE 37. When Sollitt's subcontractor tried to connect the trailer to a working water line at the underground spot indicated by the Navy, either the line was dry or the working water line was not in that location, according to differing versions of facts related to the court. *Compare* Tr. at 734-35 (Mr. Zielinski) ("[The Navy] told us which line to tap to get them the water, which we dug up. We tapped it. It was dry.") *with* Tr. at 3012 (Lt. Odorizzi) (stating that the indicated location was inaccurate and that the subcontractor, upon not finding any line there, "went five feet in the wrong direction [and] tapped a line that was not live"). In any case, the facts indicate that Sollitt's subcontractor proceeded to expend additional hours of labor digging until it found and tapped a working water line. Tr. at 735 (Mr. Zielinski) ("The plumber took it upon himself to look around, so to speak, with his backhoe equipment digging up in the vicinity [CX 47] was just the additional cost for that work. . . . It just took more time."); JE 383B Tab PCO 97 (Lt. Odorizzi memorandum dated Oct. 4, 1997) ("The contractor continued to excavate and found a line several feet away."). It is undisputed that the Navy was liable for the costs of misdirecting the plumber to the wrong underground location. The Navy paid Sollitt \$205 for the added expense that Sollitt incurred. JE 87 at 8

^{49/} Although the court calculated this amount using Sollitt's stipulated subcontractor and attorney payments and the stipulated markups, this amount is lower than plaintiff's figure of \$161,166, perhaps due to a calculation error by plaintiff.

(Modification P00055). Sollitt claims, however, that it was entitled to \$3916 for the “extra work locating a substitute water line.” Sollitt Br. at 87-88. Sollitt now claims \$3711 as the balance due for this work. *Id.* ¶ 233.

It is unnecessary for the court to resolve exactly what happened. It is, however, important to determine the reasonable costs that the Navy’s misdirection would have caused a prudent contractor to expend. Even if the plumber’s decision to hunt for a water line was reasonable, Sollitt’s claimed costs, founded on a stipulated payment of \$3364 to its plumbing subcontractor and stipulated markups, SE 2007 at 1, 3, are not credible. The cost breakdown for this extra work to locate a working water line includes charges that do not remotely relate to the testimony of witnesses at trial. In CX 47, the plumber has detailed costs for thirty-five feet of sewer pipe, and over five hours of labor to install that sewer pipe, as well as forty feet of water pipe and over an hour of labor to install that water pipe. JE 383B Tab PCO 97. None of these costs can be related to locating a working water line or making a second tap into a water line. These are more likely costs associated with the actual connection of the trailer to water and sewer lines once the good water line was found. That work was already paid for in Modification P00004.

There are other questionable costs in CX 47, including over a day’s worth of backhoe rental fees, which included the costs of a machine operator. *Id.* If, as Mr. Zielinski suggested, the plumber was trying to save the Navy money by forging ahead and finding a water line without the Navy’s assistance, Tr. at 1087, his perseverance was rather expensive and counterproductive. Also included in the plumber’s bill are material costs for the “water tap hole” and the “pressure connector,” totaling over \$900, JE 383B Tab PCO 97, which could only be valid costs if these items were limited to one use only and could not be re-used for a second tap. These costs, and the cost breakdown for CX 47 as a whole, were not explained or adequately justified by either testimony or post-trial briefing. For these reasons, Sollitt cannot be awarded its claimed costs in CX 47.

The court is unwilling to agree with defendant, however, that \$205 is adequate compensation for the Navy’s misdirection regarding the location of the water line. Lt. Odorizzi alleged that an “[a]dditional hour or so” was the only delay that the plumber faced, if the Navy had been contacted and asked to offer a new location to excavate. Tr. at 3014. The Navy’s payment was indeed calculated to cover one hour of idleness for the plumber and one tenth of a day of backhoe rental costs, operator included. JE 383B Tab PCO 97. But this appears to be too little time. According to Lt. Odorizzi, the proper procedure would have been to contact Sollitt’s superintendent, who would contact Lt. Odorizzi, who would contact the NTC water utility department, which would contact their field staff, who would then make themselves available and correctly locate the working water line. Tr. at 3012-13. The court finds that four hours would be a more accurate estimate for the costs associated with the incorrect direction: one half hour to expand the existing hole to make sure that the working water pipe was not just a couple of feet in any direction; one hour to pass the word through channels to the NTC water utility field staff; one and one-half hours for the water utility staff to get to the site and resite the location marker for the working water line; and, one hour to fill the old excavation hole and to redirect the

connecting trench from the trailer to meet up with the new tap (which according to all accounts was within five feet of the original excavation). Sollitt had the burden of proving any other associated costs that would augment these four hours of plumber labor and backhoe rental costs, and it has not done so. Although any estimate is uncertain, the court deduces that the Navy should have paid approximately four times what it did for CX 47, or \$820. Because the Navy paid only \$205, Sollitt is awarded \$615 for CX 47.

C. CX 91: Reinforce Building 122 Windowsills with Clip Anchors

There is no dispute that Sollitt anchored Building 122 windowsills to the underlying masonry walls with “Z-clips,” a type of metal straps, when the window openings were filled with plastic temporary enclosures during remodeling. Tr. at 740 (Mr. Zielinski). There is also no dispute that Sollitt’s expenses for installing the Z-clips totalled \$5375, including markups for overhead, bond premium and profit. Sollitt Br. ¶ 242; JE 231 at 17 (DCAA audit); SE 2007 at 3 (joint stipulation as to Sollitt’s payments to subcontractors). These costs were for work that was not part of the contract work as bid, because the windowsill condition was not discovered until the old windows and some of the architectural supports had been removed. Tr. at 740 (Mr. Zielinski). There is a dispute, however, as to whether the windowsill problem was caused or aggravated by Sollitt’s use of temporary plastic enclosures in the window openings, Tr. at 2500 (Lt. Odorizzi) (alleging that the plastic enclosures acted “as a sail” and banged on the windowsills until “the sills required some work”), and as to whether Sollitt’s solution of Z-clips was an authorized change to the contract work, *id.* at 3020 (stating that Sollitt “proceed[ed] with that Z clip installation prior to any direction from the government”).

Although putting plastic enclosures in the window openings in Building 122 was not part of Sollitt’s original plan to remodel the building, this measure was required to keep the remodeling of Building 122 from being overly delayed. Tr. at 3279 (Mr. Maziarka) (explaining that the plastic enclosures permitted interior work to proceed and that Building 122 Areas A and B finished “on time”). It was the Navy that imposed the tight schedule, so it would be unfair to punish Sollitt for taking reasonable measures to try to meet that schedule. Plastic enclosures are a customary solution to delays in window procurement. Tr. at 3278 (Mr. Maziarka).

It is also not clear that the plastic enclosures caused the windowsills to separate from the underlying masonry. Mr. Zielinski gave credible testimony that the bond between the windowsills and the underlying masonry had deteriorated over the years and that this weakness was fortuitously discovered when the plastic enclosures shook some of the windowsills loose. Tr. at 742 (“We just happened to find out early that the sills were rotten.”). The deterioration of the windowsills was a differing site condition for which the Navy was responsible. *See* Tr. at 3019 (Lt. Odorizzi) (noting that the government was willing to pay for windowsill reinforcement but “would have preferred” to pay for a different solution than Z-clips).

It is clear from the record that Z-clips were not the Navy’s choice of a method for anchoring

the windowsills. *See, e.g.*, Tr. at 740 (Mr. Zielinski) (“We had proposed a Z-clip, and [the Navy’s architect] proposed a flat strap . . .”). It is also clear that unless anchoring occurred quickly, substantial damage to the existing second story windowsills, and perhaps workers at NTC, would occur. Tr. at 2521 (Lt. Odorizzi) (stating that “the sills are . . . big heavy blocks of essentially masonry that had been kicked loose”). The problem was discovered by Sollitt and reported to the Navy on October 23, 1995. GE 1064. The Navy provided an alternative to the Z-clip solution proposed by Sollitt on October 30, 1995. *Id.* By this time, however, Sollitt had already installed Z-clips. *Id.* Eventually, the Navy reviewed the anchored windowsills and directed and paid Sollitt to provide further reinforcement by drilling a hole through each windowsill and the underlying masonry and cementing in a metal rod. Tr. at 2501, 3020 (Lt. Odorizzi).

Each of the windowsills weighed over a hundred pounds; they had come loose on the second floor of Building 122 and were moving about in windy conditions. Tr. at 740 (Mr. Zielinski), 2522 (Lt. Odorizzi). Sollitt proceeded with a timely response to this dangerous hazard. There was no evidence that showed that Sollitt’s choice of Z-clips did not resolve the immediate problem. The court finds that Sollitt was justified in providing the Z-clips to deal with the differing site condition of deteriorated windowsills. Sollitt is awarded \$5375 for anchoring Building 122 windowsills with Z-clips.

D. CX 94: Repair Catch Basin near Building 2B

It is undisputed that Sollitt’s plumbing subcontractor repaired a deteriorated catch basin near Building 2B. Sollitt claims \$1849 for this work that was not included in the contract. Sollitt Br. at 90-91. The parties have stipulated that Sollitt paid its plumber \$1589 for this work. The plumber’s costs for this work are reasonable, as shown in the cost breakdown for CX 94. SE 99. The only contested issue is whether the Navy was liable for this extra work.

Sollitt did not allege that the Navy directed Sollitt to repair the catch basin. *See* Sollitt Br. at 90 (stating only that “the Navy representatives knew the work was being done”). Instead, Sollitt represents that a “Type I differing site condition” forced Sollitt to repair the catch basin. *Id.* Defendant argues persuasively that Sollitt damaged the manhole-covered catch basin by repeatedly running over it with heavy construction machinery. Def.’s Br. at 43; Tr. at 2507 (Lt. Odorizzi). Sollitt did not refute this allegation of contractor-caused damage, and Sollitt’s only witness on this issue offered no explanation for the deteriorated state of the catch basin. Tr. at 744 (Mr. Zielinski). The court finds the Navy’s version of these events to be credible. Defendant’s argument that a contract clause based on FAR 52.236-9, codified at 48 C.F.R. § 52.236-9 (1994) (“Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements”), made Sollitt responsible for the costs of damage to utilities at the construction site, Def.’s Br. at 43, is also unrefuted. Because Sollitt has not proved the Navy’s liability for the deteriorated state of the catch basin, Sollitt cannot recover any monies for the catch basin repair.

E. CX 103: Provide Access Panels in Building 122 for Fan Coil Valves

Sollitt claims that “[t]he Navy required Sollitt to install 150 access panels [for the maintenance of valves attached to fan coils, air conditioning units built into the walls] in Building 122,” and that “the access panels were not indicated or shown on the contract drawings and constituted extra work.” Sollitt Br. at 91. The Navy claimed that contract specification 15895 required access panels for these valves, and refused to pay for this work. It is undisputed that the contract drawings did not show any access panels for these valves, and that access panels were shown elsewhere on the drawings where they were required. Tr. at 749-50 (Mr. Zielinski). The Navy’s argument that it is not liable for the addition of these access panels, based on contract specification 15895, is not credible.

The title of specification 15895 is “Ductwork and Ductwork Accessories.” JE 94 § 15895 at 1. There were no ducts for the fan coils. Lt. Odorizzi attempted to convince the court that access panel requirements for valves in ducts applied to the valves for the fan coils, by calling the space near a fan coil a “plenum,” which, according to his definition, “is basically a duct that transfers air, only it’s not a metal duct . . . just a space within a wall that allows air transfer.” Tr. at 2573-74. If the spaces near the fan coils were indeed plenums, it is perhaps conceivable that some portions of specification 15895 would apply to them, but the court does not need to decide that issue. As Lt. Odorizzi testified upon cross-examination, no air was transferred through these dead air spaces – the air transfer happened directly through the fan coil grills, where outside air was pulled through the machine into the classrooms of the building. *See* Tr. at 3022 (“Air is pulled through the grills of the fan coil unit, yes.”). Because the valves for the fan coils were mounted in these dead air spaces next to the fan coil units, not in plenums, specification 15895 could not possibly apply to them.

Because the Navy added 150 access panels to the bid-based contract work, Sollitt is entitled to payment for this work. The Navy has not challenged the reasonableness of the costs included in Sollitt’s CX 103, and has stipulated to Sollitt’s payment of \$5888 to one subcontractor for its portion of this work, SE 2007 at 4. Mr. Zielinski testified that another subcontractor was paid \$2798 for its portion of this work. The court finds that these costs, and the stipulated markups, SE 2007 at 1, are all reasonable costs for adding 150 access panels to the contract work. Sollitt is awarded \$9825 for CX 103.⁵⁰

F. CX 115: Cable Tray Fireproofing in Building 2B

The Navy added contract work for the rerouting of cable trays⁵¹ for wiring in Building 2B’s ceilings, and as a result, wherever these cable trays penetrated a firewall, fireproofing of the penetration

^{50/} The court’s figure is slightly lower than Sollitt’s figure of \$9857 in CX 103, SE 115, because that cost proposal utilized a 1% bond premium markup, as opposed to the stipulated .67% markup for bond premium, SE 2007 at 1.

^{51/} Cable trays are metal troughs which route above-the-ceiling wiring through a building. Tr. at 754 (Mr. Zielinski).

was needed. JE 75 (Modification P00043). The Navy added approximately \$2309 to the contract price for the fireproofing work for forty-eight penetrations. SE 105 (subcontractor Metrick Electric's estimate for \$2035 for fireproofing the cable trays); *id.* (showing that CX 115 markups for overhead, profit and bond premium would raise Metrick's costs to about \$2309); Tr. at 754 (Mr. Zielinski) (stating that the Navy "paid the entire bill" for this work). This price was a figure negotiated by the parties, although Sollitt did not sign the contract modification. Tr. at 754-55 (Mr. Zielinski) (noting that the Navy reimbursed Sollitt's initial cost proposal in its entirety).

Metrick left the project, however, and a new subcontractor completed the fireproofing work. Tr. at 2580-81 (Lt. Odorizzi). Based on an estimate submitted by the new subcontractor, on April 24, 1997 Sollitt submitted a revised cost proposal for the same fireproofing of forty-eight penetrations, and claimed that this work would cost Sollitt \$9600, not including markups. SE 384 (Revised CX 115). Sollitt did credit the Navy \$2035 for the amount Metrick had estimated and which the Navy had already paid. *Id.* Defendant does not contest that the Navy was liable for the fireproofing added costs, but does challenge Sollitt's new claim of \$8806 for revised CX 115, on the grounds that it is not "the fair and reasonable value of the work." Def.'s Br. at 47.

Metrick, on October 9, 1995, had estimated that each penetration would cost \$23.85 for fireproofing materials and would take fifteen minutes to seal, and that all together it would take twelve hours of labor, at \$25.29 per hour, to fireproof all forty-eight penetrations. SE 105. Fireproofing generally consisted of stuffing fire seal bags, also called fire stop pillows, at the firewall penetrations where the cable trays passed through. Tr. at 755-56 (Mr. Zielinski). Metrick allotted one bag per penetration, because \$23.85 was the unit price for one fire seal bag in the price list attached to its estimate. SE 105. Metrick's estimate of \$2035 meant that each penetration would cost the Navy about \$42.40 to fireproof, before markups, and this was the cost which Sollitt proposed and the Navy paid.

J.P. Larsen, the new subcontractor, was a fireproofing specialist, not an electrical contractor like Metrick. Tr. at 759-60 (Mr. Zielinski). Mr. Larsen did not break down his costs, but estimated \$200 for each penetration that he would seal with fire bags. SE 384. There is no price list submitted for the fire seal bags used, nor is the number of fire seal bags per penetration specified in Mr. Larsen's estimate, although someone had handwritten "48 bags" on Sollitt's estimate form accompanying revised CX 115. *Id.* The date of Mr. Larsen's estimate is September 23, 1996. The most credible reading of this evidence is that in less than one year, the cost claimed for sealing one penetration with one fire seal bag had soared from \$42.40 to \$200.

The court would be willing to revise Sollitt's costs upward because they were mistakenly undervalued, even if the undervaluing was done by Sollitt itself prior to commencing the work, if Sollitt had proved that its increased costs were reasonable. Sollitt has not shown that the costs claimed in revised CX 115 were reasonable, and no presumption of reasonableness may be afforded its payment to its subcontractor for this work. Sollitt's initial estimate of approximately \$2309 for this work

continues to be the best estimate of reasonable costs for this work, and Sollitt has already been paid this sum. Because Sollitt has not met its burden to prove the reasonableness of the costs claimed, an equitable adjustment cannot be granted for this issue.

G. CX 120: Dewatering during foundation stabilization of Building 2B

This claim by Sollitt is related to the differing site condition referred to as the black sand issue, discussed in Count I, Section B-3, and to a different cost proposal, CX 39, discussed in Count VII, which requested payment for the bulk of the foundation work related to the black sand issue. The proposal discussed here, CX 120, was submitted on September 18, 1996, SE 308, the same day that CX 39 was submitted, SE 297. Defendant does not contest Sollitt's entitlement to payment for work added to the contract to deal with the black sand issue. Tr. at 1274.

Dewatering, using pumps and hoses to keep the excavated trench next to the south foundation wall of Building 2B dry, added labor and equipment costs to Sollitt's foundation work. Tr. at 406-08 (Mr. Zielinski). Sollitt claims that the dewatering described in CX 120 was necessitated by a differing site condition largely caused by Navy delays in designing the revised foundation wall⁵² and by a leaking water main that drained into the trench next to the foundation. Defendant argues that Modification P00055 included reasonable dewatering labor and equipment costs, concluding "that the Navy already provided compensation for this work and that compensation was fair and reasonable." Def.'s Br. at 48-49.

Sollitt and the Navy have viewed CX 120 differently. The Navy has viewed CX 39 and CX 120 as forming a unified proposal for added work due to the black sand issue, Tr. at 2582 (Lt. Odorizzi), and in Modification P00055 the Navy included two dewatering expenses as part of its rationale for a unilateral modification to the contract, adding \$17,400 as a response to both CX 39 and CX 120. JE 383A at 022. In Sollitt's view, Modifications P00031 and P00055 produced payments that partially paid for foundation work described in proposal CX 39, and these payments served only to reduce the Navy's balance due on CX 39 and did not pay for work described in CX 120. *See* Count VII. The court has adopted Sollitt's view and granted almost all of Sollitt's claimed costs in Count VII because these represented an unpaid balance on CX 39 work, and the court credited the \$17,400 in Modification P00055 as one of the Navy's partial payments on CX 39. Thus no additional credit remains to be extracted from the \$17,400 in Modification P00055— it has been fully used to meet the Navy's responsibility under CX 39.

^{52/} The court found in Count I Section B-3 that the delays in the foundation work on Building 2B were caused both by the Navy and by Sollitt, and that apportionment of any resulting delays to critical path activities was not possible on the record before the court. The court notes that apportioning delays to critical path activities and contract completion is a more complex issue than determining the amount of dewatering required to keep an excavation trench dry when delays have kept the trench open longer than normally would be required.

What remains is an issue of quantum. Defendant argues that \$417 for twenty man hours of labor and \$250 for equipment is reasonable compensation for the dewatering.⁵³ Sollitt argues that \$3440 for 165 man hours of labor, \$250 for equipment and \$18 for water testing are the baseline costs for the dewatering. Sollitt's claim under CX 120, with all fringe benefits and markups included, totals \$6734.

Testimony from Mr. Zielinski established that water drained into the trench beginning with the initial excavation, continuing until the ground froze in winter, and then starting again in the spring. Tr. at 906-08. Testing of the water was apparently done in November 1995, *see* SE 308 (testing bill dated November 13, 1995), and that testing showed that the water came from a water pipe, Tr. at 907. According to Mr. Zielinski, the Navy was alerted to the leaking water main but chose not to fix it. Tr. at 907. Labor included digging sump holes and moving and connecting hoses and pumps. Tr. at 908.

Lt. Odorizzi confirmed that there was water in the trench and that dewatering had to be done. Tr. at 2582. He confirmed that the dispute over the labor estimate was primarily concerned with "what reasonable effort to control the water" was required, but Lt. Odorizzi did not explain how his calculation of man hours was reasonable. Tr. at 2583. There was no further testimony on this issue at trial.

The documentary evidence is sparse. There is a bill for \$18 for the water testing. The DCAA audit found that, in general, the claimed costs in this and other outstanding cost proposals were actually expended. JE 231 at 2, 17. The DCAA audit also did not challenge any of Sollitt's fringe benefit figures or markups. *Id.* at 14. The Navy "Pre Negotiation Position Memorandum" on this issue justified its smaller man hour figure by estimating that only one half hour would be needed at the beginning of each construction day, and another half hour at the end of each construction day, to monitor and pump out water. JE 383A at 022. Sollitt did not provide a specific rebuttal of this estimate, relying instead on its 165 man hour estimate in its cost proposal. SE 308.

The court notes that the water came from a source under the Navy's control. According to Mr. Tipton's analysis of the work schedule on the foundation of Building 2B, it appears to the court that the trench was open during three construction months, early November 1995 to early January 1996, and early April to early May 1996. JE 235 Issue 204. According to the same analysis, it appears the trench was also open during the three initial delay months, from August 2, 1995 to November 6, 1995. *Id.* During the first two delay months caused by the Navy, inspectors, testers and engineers needed access to the foundation. Sollitt-caused delays occurred largely in October 1995 when nothing appears to have been happening in the trench. Assuming that no dewatering occurred during the winter months of further delay, dewatering may have been necessary for as many as five months, depending on

^{53/} These are baseline figures before any markups have been applied. The calculations for figures related to this issue eventually used in Modification P00055 appear to have adopted all of Sollitt's proposed markups except for fringe benefits. *See* JE 383A at 023-24.

when the ground froze.

Under defendant's analysis, dewatering was only necessary during four weeks of construction (one hour per day times twenty days of construction). JE 383A at 022. This dewatering estimate appears to the court to be too low. The court agrees that Sollitt's audited cost proposal is more accurate and better represents the reasonable costs of dewatering. Sollitt is granted \$6734 for CX 120.

H. CX 138: Dowel Pinning for Building 122 Coping

The limestone coping that capped the masonry walls at the parapet of Building 122 was removed and replaced by Sollitt, as part of the contract work. Tr. at 911-12 (Mr. Zielinski). The contract drawing labeled "Existing Parapet Detail" instructed Sollitt to "remove existing [limestone] cap, clean and re-install dowel[s]." JE 279 at A806. Dowels in this case are metal rods fastened in drilled holes in the limestone cap and underlying masonry to secure the limestone cap and reinforce its stability. Tr. at 3030 (Lt. Odorizzi). As Sollitt's subcontractor discovered, however, there were no dowels holding the coping in place. SE 124 (undated handwritten note from Horizon Builders Corporation, Sollitt's masonry subcontractor, stating that "when the coping was removed it was discovered that no dowels or holes in coping existed"). Although there is no evidence that Sollitt gave written notice of this differing site condition to the Navy, there is evidence that the Navy eventually received actual notice of the missing dowels. See Tr. at 3031 (Lt. Odorizzi) (stating that "they didn't bring it to our attention until after they had put the dowel pinning in place and asked us, through an RFI: is this how you want it done?"). The real controversy here is whether Sollitt gave timely notice of the differing site condition, and if not, whether the Navy was prejudiced by lack of timely notice of this differing site condition.

Testimony and documents covering this issue were sparse. Lt. Odorizzi's version is that he was presented with a *fait accompli*, because Sollitt's subcontractor drilled holes for and installed new dowels before Lt. Odorizzi and the architect/engineer representative could visit the parapet of Building 122. Tr. at 3032. Lt. Odorizzi also testified that if given timely notice, the Navy's solution might have been to install no dowels whatsoever. Tr. at 3035 ("So if the [old] coping didn't require dowel[ing] to begin with, no need to put dowel[ing] in this [new coping]."). Sollitt's version is that "[t]he Quality Control Manager for the project was made aware of the condition" and that "its subcontractor had to replace certain dowels which were required to reset the roof coping of Building 122." Sollitt Br. at 94. Mr. Zielinski testified that Sollitt "did not have the ROICC office's direction [to install dowels], and [that he] believe[d] the only way [the Navy] knew that this was happening was through the Q[uality] C[ontrol] manager." Tr. at 1106. The quality control manager was not a Navy employee, and was paid by Sollitt. Tr. at 913 (Mr. Zielinski).

The evidence before the court does not show that Sollitt gave the Navy notice of the missing dowels before adding extra work to the contract, as required by the Differing Site Conditions clause. See 48 C.F.R. § 52.236-2(a), (c) (1994) ("No request by the Contractor for an equitable adjustment

to the contract under this clause shall be allowed, unless the Contractor has given the written notice required [before the conditions are disturbed] . . .”). Neither party presented evidence of an RFI submitted to the Navy for this issue, so it is impossible to tell when notice may have been given to the Navy. Sollitt also did not establish a date for when its masonry contractor installed the dowels. The court finds that the testimony of Lt. Odorizzi and Mr. Zielinski shows that the Navy had notice of the missing dowels but that this notice was untimely.

“In order to prevail in a case in which notice [of a differing site condition] has not been provided on a timely basis by the contractor, the government has the burden of proving that the untimeliness caused prejudice to its case.” *Big Chief Drilling Co. v. United States*, 15 Cl. Ct. 295, 303 (1988) (citing *H.H.O. Co. v. United States*, 12 Cl. Ct. 147, 164 (1987) and *Gulf & W. Indus. v. United States*, 6 Cl. Ct. 742, 755 (1984)). The Navy has shown that it was prejudiced by the lack of timely notice, because Sollitt’s solution for the missing dowels may have been entirely unnecessary, or a lower cost solution might have been preferred. Tr. at 3031-32 (Lt. Odorizzi) (explaining that the existing coping had survived several years without doweling, and that “a lot of times masonry joints are tapered in such a way as they are held in place with the mortar and gravity basically”); see *Schnip Bldg. Co. v. United States*, 645 F.2d 950, 959 (Ct. Cl. 1981) (approving and quoting a board of contract appeals’ decision that rejected a contractor’s claim because “[t]he lack of a timely notice was prejudicial to the Government because it effectively prevented any verification of [the contractor’s claim of a differing site condition] and also the employment of alternate remedial procedures”).

Because Sollitt has not proved that the Navy was liable for this extra work that Sollitt performed without direction from the Navy, Sollitt cannot recover the costs of dowel pinning the parapet coping on Building 122. No monies are awarded Sollitt for CX 138.

I. CX 147: Replace Unsuitable Soil at Building 2B

Sollitt claims that it encountered a Type I differing site condition of unsuitable soil hidden underneath asphalt when excavating Building 2B’s foundation. Sollitt paid \$2150 to its subcontractor to remove some allegedly unsuitable soil and replace it with rock. SE 2007; SE 364 (Revised CX 147). Mr. Zielinski testified that the unsuitable soil at Building 2B required removal. Tr. at 919-21. Sollitt did not prove, or attempt to prove, however, that this particular soil differed materially from what was indicated in the contract documents. “Success on a Type I Differing Site Conditions claim turns on the contractor’s ability to demonstrate that the conditions ‘indicated’ in the contract differ materially from those it encounters during performance.” *P.J. Maffei Bldg. Wrecking Corp. v. United States*, 732 F.2d 913, 916 (Fed. Cir. 1984) (footnote omitted).

Even if Sollitt had proved the existence of a Type I differing site condition, Sollitt provided no evidence that it gave the Navy notice of this issue. There is no RFI in the record asking for the Navy’s direction on this issue, and Mr. Zielinski could not remember if he gave the Navy notice of this issue, Tr. at 1109. Sollitt alleges CX 147, a cost proposal for added work replacing the unsuitable soil, was

submitted on April 15, 1996, Sollitt Facts ¶ 425, but did not enter CX 147 into evidence. Instead, Sollitt entered Revised CX 147 into evidence, which was submitted on April 11, 1997, well after contract work was completed. SE 364. There is also no evidence in the record that permits the court to determine whether the costs claimed in Revised CX 147 were reasonable.

Sollitt did not establish sufficient facts to prove that there was a Type I differing site condition, that it gave notice of this issue to the Navy or that the Navy had actual notice of this issue. Sollitt has not proved that the Navy was liable for any extra work related to this issue, or that its costs for this work were reasonable. No monies are awarded to Sollitt for CX 147.

J. CX 149: Reroute Exhaust Fan Ductwork per RFI 119

In this instance the Navy does not challenge its liability for work performed. The only dispute regarding CX 149 is whether Sollitt's claimed costs exceeded reasonable costs for a change to contract work involving rerouted ductwork for an exhaust fan in Building 122. Tr. at 922 (Mr. Zielinski); Tr. at 2597 (Lt. Odorizzi). The Navy paid \$988 for this work, JE 87 at 7, whereas Sollitt's proposed costs were \$1538, JE 129. The Navy contends that Sollitt's claimed costs of materials were too high, because scrap duct materials should have been reused, and that design costs should not have been included in CX 149. Def.'s Br. at 53; Tr. at 2597 (Lt. Odorizzi).

Mr. Zielinski's testimony that scrap pieces of duct were not suitable for this work that involved as much as thirty linear feet of new duct was credible. Tr. at 1109. Lt. Odorizzi's contention that any design costs should have been covered by Sollitt's overhead markup was not further explained to the court. The design cost was a line item on a subcontractor invoice which Sollitt was required to pay in order to complete the changed work – this cost does not appear to be accounted for in Sollitt's overhead charges. Because the subcontractor's proposed cost of \$1355 for this changed work was reasonable, and because Sollitt is entitled to stipulated markups for overhead, profit and bond premium, SE 2007 at 1, Sollitt was entitled to payment of \$1533⁵⁴ for this changed work. Sollitt is awarded \$545 for CX 149, the difference between \$1533 and the Navy's payment of \$988.

K. CX 165: PC 56 Damper Revisions in Building 122

The only dispute regarding CX 165 is whether Sollitt's claimed costs are reasonable costs for a change to contract work involving revisions to ventilation dampers in Building 122 and furring⁵⁵ out

^{54/} The court's figure is slightly lower than Sollitt's figure of \$1538 in CX 149, SE 129, because that cost proposal utilized a 1% bond premium markup, as opposed to the stipulated .67% markup for bond premium, SE 2007 at 1.

^{55/} Furring is an activity that increases the size of an existing wall cavity, and includes cutting
(continued...)

walls to accommodate ventilation equipment that did not fit the space designed for it. Tr. at 925-26 (Mr. Zielinski). Competing versions of the dispute state either that Sollitt made the mistake of walling in and doing finish work over ventilation components before final changes were made affecting them, Tr. at 2614 (Lt. Odorizzi), or the Navy made the ventilation system changes after drywall and paint had been applied to cover up the areas affected by the changes, Tr. at 1112-13 (Mr. Zielinski). The Navy paid \$1930 for this work, JE 87 at 3, based on its analysis of Sollitt's cost proposal, and the Navy largely disallowed costs related to ripping out and repairing drywall and finish painting, JE 383A at 110-176. The parties stipulated that Sollitt paid its subcontractors a total of \$10,049 for this work, SE 2007, and Sollitt asserts that \$13,898 was a reasonable value for the changed work, Sollitt Br. at 98, a figure which includes \$2033 for Sollitt's own work, *id.* at 97, and stipulated markups for profit, overhead and bond premium, SE 2007 at 1. Sollitt now claims a balance due of \$11,968.

If there had been only one revision to the dampers and ventilation equipment for Building 122, the Navy's rejection of the costs of tearing out drywall, disposing of drywall, repairing drywall and repainting drywall would be more credible. But the documentary evidence submitted by the parties refers to revisions that occurred both in December 1995 and January 1996. JE 383A at 175-76 (RFI 138 response dated Dec. 19, 1996 concerning furring out of walls); SE 346 (subcontractor estimates dated Jan. 22 and 25, 1996 referring to a Guernsey memorandum dated Jan. 3, 1996 related to damper revisions). In addition, Mr. Zielinski testified that the January 3, 1996 Guernsey memorandum changed a prior RFI response concerning dampers in Building 122, which indicates that an earlier revision to this system had also occurred. Tr. at 928-29. Because of the multiple revisions made to the ventilation system in Building 122, the court finds that Sollitt is entitled to the costs associated with uncovering and covering up changed work.

Therefore, the court finds that the figure of \$13,625,⁵⁶ the total of Sollitt's stipulated payments to subcontractors of \$10,049, Sollitt's claimed costs of \$2033 for its own work, and stipulated markups, represents the reasonable value for the changed work in CX 165. Because the Navy only paid \$1930, Sollitt is awarded \$11,695 for CX 165.

L. CX 208: Revise Folding Partition Head Installation

The dispute here is whether a change to contract work involving a redesigned installation around the top or head of a folding partition wall in Building 2B was caused by a conflict between contract specifications and drawings or by contractor installation error. *Compare* GE 1027 (RFI 186) (stating that the partition head "may require additional framing, labor, etc. . . . [because] [s]tructural

⁵⁵(...continued)
back drywall and studs. Tr. at 926.

⁵⁶/ The court's figure for the value of CX 165 work is slightly lower than Sollitt's figure, perhaps due to a calculation error by plaintiff.

steel is lower than finished ceiling heights”) *with* Tr. at 2631 (Lt. Odorizzi) (“Because [the partition head] wasn’t installed per the contract drawings, something had to be redesigned for it.”). The Navy’s response to RFI 186 was to offer a solution to the dimensional problem, GE 1027, and Lt. Odorizzi admitted that his initial analysis of this problem was that this redesign was a potential change to contract work, Tr. at 3040. The court agrees with that initial assessment that this was a Navy-caused and Navy-directed change to contract work for which the Navy is liable.

There was no evidence that could be read to show contractor error in the variance that occurred between the ceiling height and the partition head height. Instead, Lt. Odorizzi pointed to an alleged variance between the width of one horizontal piece of steel as installed versus its depiction in the contract drawings. Tr. at 2630-31 (comparing GE 1027 and JE 279 Part B at A709 Detail 1). Although this alleged variance may have been a contractor error, the problem created by the contract drawings and specifications was an unrelated gap between the partition head and the ceiling, a cosmetic issue which Sollitt brought to the Navy’s attention in RFI 186.

After the Navy’s architect/engineer representative looked at the problem area, he created a sketch of a proposed solution which solved not only the gap problem, but which also solved an undetected design flaw, the lack of any sound barrier above the ceiling to prevent noise from traveling over the partition when it was closed. GE 1027; Tr. at 933 (Mr. Zielinski). Sollitt implemented this solution and requested \$819 for this work in Revised CX 208. SE 290. The parties have stipulated that Sollitt paid its subcontractor \$698 for this work. The court has reviewed the costs for labor and materials and markups in Revised CX 208 and finds that these are reasonable. Sollitt is awarded \$819 for the change to the partition head installation.

M. CX 230: Cypher Lock Revisions in Building 2B

As discussed in Count I Section B-6, the court found that wiring the cypher locks was part of the contract work as bid. No costs may be awarded Sollitt for wiring the cypher locks. Although the outlet added to each junction box caused a small increase in labor and materials to Sollitt, JE 382 at 100188; SE 263, the deletion of labor and materials for the installation of three cypher locks appears to have saved Sollitt more in installation costs, SE 263. Because Sollitt has not proved that the revisions to the cypher lock installation caused a net increase in costs to Sollitt, no money is due Sollitt for CX 230.

N. CX 243: Revised Flagpoles

As discussed in the Count I Section A-3 of this opinion, CX 243 attempts to recover costs for revisions to flagpoles installed in front of the Range Buildings. A prior CX 88 was paid by the Navy in Modification P00044 to reimburse Sollitt \$1899 of the \$1907 requested for post-award changes to the requirements for these two flagpoles. Here, the court must decide whether the costs for modifying two flagpoles that did not meet the revised requirements provided by the Navy on October 5, 1995, when

Sollitt ordered, received delivery and installed these flagpoles in March and April 1996, are costs that are chargeable to the Navy as changes made to the contract. Sollitt claims \$4220 for these costs, substantiated by a payment to its flagpole supplier for \$3625. For the following reasons, the court finds that these costs were incurred due to contractor or subcontractor error, for which the Navy is not responsible.

It is clear that Sollitt had notice of revisions to the flagpoles on October 5, 1995. Sollitt acknowledged those revisions in a cost proposal, CX 88, submitted to the Navy on January 19, 1996. A negotiation in March 1996 produced a compromise figure, \$1899 of the \$1907 claimed in CX 88, but a dispute related to time extensions for a variety of changes to the contract prevented Sollitt from signing a contract modification at that point. *See* SE 231 (May 15, 1996 letter from Mr. Strong stating that “[a] modification was issued . . . including the monies requested from [the flagpole supplier for the revised flagpoles] . . . [but] this modification could not be signed by [Sollitt] as it included language which precluded equitable time extensions”). Correspondence between the Navy and Sollitt confirms that after these negotiations, Sollitt proceeded “in good faith” to try to procure flagpoles that met the revised requirements. SE 213; SE 231. These letters also point to the real dispute in this issue – whether Sollitt’s flagpole supplier “delivered the wrong poles,” SE 213 (letter from Lt. Odorizzi), or whether the flagpole supplier delivered “poles for this project in accordance with contract requirements,” SE 231 (letter from Mr. Strong).

Although Sollitt alleges in its post-trial brief that “[a]t the Navy’s direction, the type of flag poles to be installed at the Range Buildings were changed on a number of occasions,” this allegation is not supported by any citation to the record or by the evidence before the court. Rather, the one revision of October 5, 1995, for which CX 88 was submitted and ultimately paid almost in its entirety, is the only flagpole revision substantiated by contemporaneous documents. The Navy’s May 2, 1996 letter simply reiterated the same wind load requirements found in its October 5, 1995 RFI 73 response, and suggested that the wrong poles that had been installed should be replaced or modified to meet those requirements. SE 213. The letter also mentioned oral conversations regarding costs, and included a request that Sollitt submit a cost proposal for “costs as agreed to earlier today.” *Id.* That conversation was not otherwise memorialized, however.

It may be that Sollitt had an incomplete understanding of the October 5, 1995 revisions to the flagpole design. *See* Tr. at 334 (Mr. Strong) (stating that the installed flagpoles were not “what they [the Navy] wanted ultimately, and we didn’t really define that until it arrived on the job”); Tr. at 935 (Mr. Zielinski) (stating that “[t]he Navy said we had misinterpreted what they wanted [for a flagpole design]”). Sollitt’s witnesses testified that the Navy was changing the flagpole design, not just in wind loading, but also regarding the number of masts; however, this testimony was conflicting and not convincing. *Compare* Tr. at 334 (Mr. Strong) (stating that the original design was for a double-masted pole and that the Navy changed that to a single-masted pole) *with* Tr. at 935 (Mr. Zielinski) (stating that he thought the Navy “change was to turn it into a double-masted flagpole”); *see also* Tr. at 2648 (Lt. Odorizzi) (stating that the revisions concerned “changes required to the flagpoles to accommodate

the wind-load requirements”). There is no documentation in the record of a Navy-directed change to the number of masts required for the flagpoles. What is certain is that the flag supplier delivered, and Sollitt installed, flagpoles that met the original design in the contract specifications and not flagpoles that met the revised requirements. *See* SE 201 (April 29, 1996 letter from flagpole supplier stating that “the flagpoles provided are in accordance with the approved submittals received by [us]”); SE 231 (May 15, 1996 letter from Mr. Strong stating that the flagpoles installed were “in accordance with contract requirements and approved submittals”); Tr. at 333-34 (Mr. Strong) (stating that “our contention [in the May 15, 1996 letter] that the [revisions] created changes and added requirements for wind-loading that we didn’t, you know, originally have and ultimately stating that our original responsibility was to furnish a double-masted flagpole, which we did”); Tr. at 1303 (Mr. Zielinski) (“It is my understanding we did provide the flagpole that met the contract documents and we had to modify it.”); Tr. at 1304 (Mr. Zielinski) (stating that the flagpole revisions were “like non-binding direction that I shouldn’t have followed and I should have stuck with my contract documents, which I did do”).

Sollitt had notice of flagpole revisions and did not prevent the delivery and installation of flagpoles which did not meet the revised criteria for these flagpoles. Its flag supplier eventually charged Sollitt for “additional materials, labor, and freight” to retrieve, modify and redeliver the flagpoles. SE 201. Although no cost breakdown was provided for CX 243, the court must assume that the \$4220 claimed here is at least in part comprised of charges due to the delivery and installation of the wrong flagpoles. There may be additional costs in CX 243 required by unspecified changes to the flagpole design, but these unspecified changes were not proved at trial. The only changes to the flagpoles that were proved at trial were the October 5, 1995 revisions which were compensated in Modification P00044 in the amount of \$1899. Sollitt has not met its burden to prove that the costs claimed in CX 243 were for Navy changes to the contract requirements for flagpoles. No money can be awarded Sollitt for this issue.

O. CX 257: Complete Revised Chiller Power in Building 122

Sollitt claims that it encountered a Type I differing site condition when, after it had installed the chiller to serve Building 122, it discovered that the 600 amp electrical service its electricians had wired pursuant to the contract drawings was not sufficient to power the chiller it had installed. Sollitt Br. at 101; Tr. at 155-66 (Mr. Strong). The chiller was a large piece of equipment, approximately 20 feet by 8 feet, and the required cooling tonnage for Building 122 was considerable, approximately 220 tons. Tr. at 162, 422. It is undisputed that the 600 amp service shown on the contract drawings was not adequate to power the chiller installed by Sollitt.

Sollitt’s argument is that because Sollitt submitted its chiller choice for approval to the Navy and received that approval, this approval led Sollitt to believe that its chiller and the electrical service required by the contract documents and wired by Sollitt’s subcontractor were compatible. Sollitt Br. at 23-24, 55. Sollitt also alleges that the construction documents were defective. *See id.* ¶ 65 (“The Navy responded by providing a solution . . . to provide additional electrical work to cure its defective

construction documents.”). At trial, Sollitt did not prove either that it encountered a Type I differing site condition or that the contract documents were defective. But the Navy must nevertheless shoulder some of the costs of the revisions to the 600 amp service, for the equitable reasons discussed below.

Sollitt alleges that it encountered a Type I differing site condition in the chiller power design. “Type I differing site conditions consist of ‘subsurface or latent physical conditions at the site which differ materially from those indicated in th[e] contract.’” *Control, Inc. v. United States*, 294 F.3d 1357, 1362 (Fed. Cir. 2002) (quoting 48 C.F.R. § 52.236-2(a)(1) (1994)). Nothing in the electrical drawings/specifications or in the chiller specifications refers to subsurface or latent physical conditions at NTC. These contract documents reference equipment and wiring that would be installed once contract performance had begun. These are not site conditions.

Even if the court were to consider electrical plans and chiller requirements to be site conditions, Sollitt’s Type I differing site condition claim is defective. The element that Sollitt alleges creates the “differing site condition” or conflict is the Navy’s approval of the chiller that Sollitt chose, the chiller that proved to be incompatible with the installed 600 amp service. Tr. at 159. The Navy’s approval of Sollitt’s choice of chiller happened after Sollitt had bid, had been awarded the contract and had commenced performance. Entitlement to equitable adjustments of a contract based on Type I differing site conditions may exist if differences are found when contract conditions, as described in the contract documents, are compared with actual site conditions. *Control*, 294 F.3d at 1362 (citing *H.B. Mac, Inc. v. United States*, 153 F.3d 1338, 1345 (Fed. Cir. 1998)). The Navy’s approval of Sollitt’s chiller choice could not be a contract condition, simply because this approval occurred after the contract conditions had been fixed by the parties. Sollitt did not encounter a Type I differing site condition in the inadequate power supply to the chiller for Building 122.

Another liability theory alluded to by Sollitt in passing is one in which Sollitt alleges that the contract specifications related to the chiller and its power supply were defective. Sollitt Br. ¶ 65. The government implicitly warrants its design specifications for a government construction contract:

It is well settled that where the government orders a structure to be built, and in so doing prepares the project’s specifications prescribing the character, dimension, and location of the construction work, the government implicitly warrants, nothing else appearing, that if the specifications are complied with, satisfactory performance will result.

J.D. Hedin, 347 F.2d at 241 (citations omitted). “[I]f this court finds the cause [of faulty construction] to be a deficiency in a design specification the government would bear the risk, and consequently be liable for reasonable costs incurred by the plaintiff.” *Neal & Co. v. United States*, 19 Cl. Ct. 463, 467-68 (1990), *aff’d*, 945 F.2d 385 (Fed. Cir. 1991). Defective design specifications may entitle a contractor to an equitable adjustment of the contract for the reparative work required to build a satisfactory end-product.

But not all contract specifications are design specifications – some are merely performance specifications:

Design specifications explicitly state how the contract is to be performed and permit no deviations. Performance specifications, on the other hand, specify the results to be obtained, and leave it to the contractor to determine how to achieve those results.

Stuyvesant Dredging Co. v. United States, 834 F.2d 1576, 1582 (Fed. Cir. 1987) (citation omitted). The government does not implicitly warrant performance specifications for complete accuracy or adequacy. *Id.* “[T]ypical ‘performance’ type specifications set forth an objective or standard to be achieved, and the successful bidder is expected to exercise his ingenuity in achieving that objective or standard of performance, selecting the means and assuming a corresponding responsibility for that selection.” *J.L. Simmons Co. v. United States*, 412 F.2d 1360, 1362 (Ct. Cl. 1969).

Here, the chiller specification was a typical performance specification, where the government specified only the result, that of a particular cooling capacity, and Sollitt was left the discretion to install an appropriate chiller. *See* Tr. at 391 (Mr. Strong) (admitting that “the specifications spell ou[t] certain requirements for a chiller unit identifying characteristics they want [but do not] nail down what chiller we’re to provide them”). The electrical service drawing was more specific and detailed and showed a 600 amp service going to the chiller. Tr. at 159-60 (Mr. Strong). This electrical drawing could appropriately be called a design specification. But Sollitt did not prove that the design specification for the 600 amp service for the chiller was defective, because there was no conclusive testimony or evidence stating that the 600 amp service was inadequate for any appropriate chiller.

There was conflicting testimony and evidence as to various chiller models and their power needs, but no expert testimony helped guide the court’s analysis of this issue. *See* SE 233 (Sollitt’s subcontractor’s letter concerning chiller models); JE 233 Tab 6 (Guernsey letter concerning chiller power requirements); Tr. at 163 (Mr. Strong) (stating his opinion concerning commercially-available chillers but admitting that he was not an electrical engineer). Although doubt was cast upon the adequacy of the 600 amp service, the evidence as a whole does not establish that the chiller power design specification was defective. Because it is Sollitt’s burden to prove that the design specifications were defective, this theory of liability also fails.

The court is reluctant, however, to absolve the Navy from all responsibility for costs that Sollitt incurred at least in part due to actions by the Navy. The testimony and evidence before the court show that the chiller specifications and the electrical and mechanical drawings were complex and subject to multiple interpretations. There was unchallenged testimony from Mr. Strong that Sollitt was diligent in discovering and addressing several problems with the chiller design. Tr. at 420. Sollitt chose a standard model from a standard maker of chillers to meet cooling tonnage requirements and submitted this model for approval. Tr. at 162. The Navy approved the chiller that Sollitt selected in June 1995.

SE 233. Sollitt's subcontractor proceeded with electrical work in Building 122. The Navy never notified Sollitt that its choice of chiller could not be powered by the 600 amp service that was called for on the Navy's electrical drawings for Building 122.

Sollitt had a duty to install a functioning chiller that would serve Building 122. The Navy had a duty to provide a workable design, and to approve Sollitt's submittals if Sollitt's submittals would permit that design to work. Both parties neglected these duties to some extent, and extra costs were incurred to rip out the 600 amp service and install an 800 amp service. Because this particular controversy does not fit neatly into liability under a particular contract clause, the court turns to equitable solutions from controlling contract law. As the Court of Claims stated, in some cases one finds "the general proposition that, when a misunderstanding results from carelessness by both parties to a contract, neither should benefit at the expense of the other." *Cover v. United States*, 356 F.2d 159, 160 n.4 (Ct. Cl. 1966).

When this principle has been applied in the context of mutual mistakes concerning facts underlying contract performance, one potential remedy is reformation of the contract to share the added costs encountered by the contractor. This equitable remedy was used in *National Presto Industries, Inc. v. United States*, 338 F.2d 99 (Ct. Cl. 1966). The Court of Claims commented that it felt "impelled" to consider an equitable solution because "an innocent mistake . . . apparently led the contractor, without fault, to a large loss." *Id.* at 107. In that case both parties joined in an erroneous assumption, so the court "divide[d] the cost between the two parties, neither of whom c[ould] be properly charged with the whole." *Id.* at 111. Although here it is not so much mistake as inadvertence, because both parties shared in causing the added costs, the only just solution is to have both parties bear the burden of their carelessness. Therefore, the court finds the Navy liable for half of the reasonable costs of the chiller power revisions.

The parties stipulated that Sollitt paid its subcontractor Jupiter Electric \$16,724 for this work. SE 2007 at 5. Mr. Strong testified that changing the electric service to the chiller for Building 122 involved substantial rewiring and new parts. Tr. at 161, 165-66. Sollitt's payment to its subcontractor was reasonable for this work. To this payment, Sollitt was entitled to apply stipulated markups for profit, overhead and bond premium. When these markups are added, the reasonable costs for this work total \$18,917.⁵⁷ The Navy is liable for half of this amount, or \$9459. Sollitt is awarded \$9459 for the chiller power revisions.

P. CX 258: Complete Elevator Inspection Revisions

Sollitt was to provide a working, inspected elevator in Building 122 as part of the contract

⁵⁷Although the court calculated this amount using Sollitt's figures, this amount is slightly higher than Sollitt's claim for CX 257, perhaps due to a calculation error by plaintiff.

work. Tr. at 2651-52 (Lt. Odorizzi). The elevator failed inspection for numerous problems cited by the inspector. Tr. at 939-41 (Mr. Zielinski). Although Mr. Zielinski testified that the inspection failure was the result of construction performed by Sollitt as it correctly followed instructions in contract documents, Tr. at 939, this allegation was not supported by credible proof. Sollitt proved only one conflict between the elevator specifications and the contract drawings. The contract drawings showed a sump pump drain located in the elevator pit. *See* SE 2004 (Guernsey memorandum stating that the drain location on the contract drawings conflicted with the elevator specifications, because this location violated elevator safety codes referenced therein).⁵⁸ No other conflicts between the elevator specifications and other contract documents were supported by credible evidence.

Sollitt submitted a cost proposal, CX 258, on April 11, 1997, well after contract work had been completed, for various work items to bring the elevator into compliance with elevator specifications and to pass inspection. SE 374. There was no work for the sump pump drain relocation in CX 258. *See* Tr. at 1329 (Mr. Zielinski, reviewing costs included in CX 258) (“I would have expected to see . . . the plumber. . . . I don’t see A & H Plumbing and I would have thought that would have been his work to reroute that elevator sump pump discharge.”). Because the sump pump relocation would have been the only conceivable change to the contract work related to the elevator inspection failure for which the Navy might have been held liable, and because CX 258 contains no costs for that work, Sollitt cannot recover any of the claimed costs in CX 258.

^{58/} In the case of a conflict between the elevator specifications and the contract drawings, the specifications would normally have governed, presumably because a standard contract provision titled “Specifications and Drawings for Construction,” 48 C.F.R. § 52.236-21(a) (1994), would typically have been part of this contract. This provision states that “[i]n case of difference between drawings and specifications, the specifications shall govern.” *Id.* Thus, Sollitt would not have been “building in accordance with the contract documents,” Tr. at 939 (Mr. Zielinski), if it resolved this conflict by following the contract drawings and ignoring the elevator safety code specification, if this standard contract clause was in force here. This is an open question, as neither party has specifically informed the court that this contract provision was incorporated into the contract at issue.

It is undisputed, however, that the standard Department of Defense construction contract clause titled “Contract Drawings, Maps, and Specifications,” 48 C.F.R. § 252.236-7001(d) (1994), was part of this contract, Def.’s Mem. at 5, and this clause places the burden on the contractor to correctly install “manifestly necessary” work items, despite omissions or mistakes in contract drawings. This provision states that “[o]missions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the contractor from performing such omitted or misdescribed details of the work, but shall be performed as if fully and correctly set forth and described in the drawings and specifications.” 48 C.F.R. § 252.236-7001(d). Installing an elevator that met code was manifestly necessary and was Sollitt’s responsibility.

Q. CX 260: Additional Work with Government Furnished Equipment on Ship's Trainer

Sollitt claims that its subcontractor, David Architectural Metals, Inc., spent “additional unanticipated” hours installing equipment on the ship’s trainer, and that these added hours were the result of changes ordered by the Navy in Amendments 14, 18 and 19. The Navy rejected Sollitt’s CX 260, requesting payment of \$10,325 for this work, SE 361, as not sufficiently substantiated because the information provided to support the cost proposal was incomplete and inadequate. Def.’s Br. at 70. Sollitt currently claims \$11,648 for this “added” work. Sollitt Br. ¶ 317. As defendant points out, however, Sollitt did not substantiate this claim at trial.

Sollitt relies primarily on the parties’ joint stipulation that \$10,007 was paid to David Architectural with reference to CX 260. Sollitt Br. ¶ 315 (citing SE 2007 at 5). But the Navy, in signing the joint stipulation, did not admit “Sollitt’s claim of entitlement and claim that the payments represented the fair market value of the reasonable and necessary labor and materials required to perform the work covered by the respective change proposals (CXs), or that the work was in addition to the contract price.” SE 2007 at 2. Sollitt presented no documentary evidence which would give detail or a breakdown of the \$10,007 paid to David Architectural.⁵⁹ Mr. Zielinski, in the absence of written materials to refresh his memory, only was able to specifically testify to one instance of work that was represented in CX 260, the work “to relocate those vertical posts [for a safety rail on the ship’s trainer].” Tr. at 944. When asked for a documentary reference to that change, he added that “I think you’d find it in Amendment 18 or 19 that included moving that safety rail from our obligation to the government.” *Id.* Amendment 18 did change the obligation to provide the safety line from Sollitt to the Navy. JE 167. No other equipment installation tasks that might have been included in CX 260 were described by Sollitt witnesses.

The court notes that another Sollitt cost proposal, CX 213, was submitted August 9, 1996, was titled “Relocate Ship Rail Posts” and was fully paid, according to Sollitt’s exhibit entitled “Re-Cap of CX Proposals.” SE 2002. This documentary evidence significantly weakens the credibility of Mr. Zielinski’s testimony on this issue. As to what work might have been represented in Sollitt’s CX 260 that was submitted on April 11, 1997, almost a year after the beneficial occupancy date for the ship’s

^{59/} Sollitt’s counsel noted the lack of detailed cost breakdowns with its CX 260 exhibit, *see* Tr. at 1336 (observing that the one-page exhibit, SE 361, made reference to included cost breakdowns but that these pages were missing), and Sollitt offered to attach the missing pages to SE 361, Tr. at 1384 (stating that two additional pages had been found and that both apparently had been produced by David Architectural), but these additional pages are not in the record before the court. If this exhibit had been complete at trial, Sollitt’s fact witnesses might have been able to testify as to what work was represented in CX 260, and this might have aided the court’s analysis of the Navy’s potential liability for work added to the bid-based contract work.

trainer, no facts were established at trial. The two references in Sollitt's Post-Trial Brief to this work are vague and cursory: "Additional Work with Government Furnished Equipment on Ship's Trainer" and "additional unanticipated manhours installing government-furnished equipment." Sollitt Br. at 103. Lt. Odorizzi testified that he did not "know which specific work they're talking about" in CX 260. Tr. at 2655. The court does not know either.

Sollitt has not met its burden to show the Navy's liability for changes to the contract as claimed in CX 260. No costs can be awarded Sollitt on this issue.

R. CX 278: Add Power Circuits for Air Compressor

On February 27, 1996 Sollitt submitted RFI 187 asking how to connect the "control air compressor" for Building 122 to power, because no electric service was shown on the contract drawings for this piece of machinery. SE 261 (attachment to CX 278). The Navy responded on February 29, 1996 with the requested information, but Lt. Odorizzi indicated on the form that no funds would be added for this work because electric power for the air compressor was included in the bid-based contract work. *Id.* Although a specific contract specification for the air compressor in question is not in evidence, it is clear that Sollitt was to provide a connection to electric power for any equipment it installed that could only be powered by electric motors. *See* JE 94 § 16011 ¶ 1.11.1 ("Provide electrical components of mechanical equipment, such as motors The interconnecting power wiring and conduit . . . shall be provided as an integral part of the equipment."); Tr. at 1339 (Mr. Zielinski) (admitting that he had "always known that [he] had the obligation to provide the air compressor, [he] just didn't know where to get the electrical power"). When a specification requires an obvious power connection that has been omitted on contract drawings, the contract drawing should be read to include that omitted item. *See* 48 C.F.R. § 52.236-21(a) (1994) (mandatory clause for federal fixed-price construction contracts) ("Anything mentioned in the specifications and not shown on the drawings . . . shall be of like effect as if shown or mentioned in both."). Sollitt could not reasonably expect to provide an air compressor without power to run it. The Navy was not liable for adding this connection to power, because it was part of the contract work as bid. Sollitt is awarded no monies for CX 278.

S. CX 306: Building 2B Fire Alarm Revisions

Sollitt presented credible evidence that significant post-award changes were made to the fire alarm system in Building 2B. Tr. at 958-59 (Mr. Zielinski); SE 2006 (Sollitt letter of August 2, 1996 informing the Navy that these revisions would be addressed in a later cost proposal). Although some documents are missing concerning the changes, the weight of the evidence indicates that a more expensive system resulted. *See* SE 373 (Sollitt's electrical subcontractor letter of January 10, 1997 indicating that the changed system cost Sollitt \$7677 more); SE 2007 (stipulation that Sollitt paid Jupiter Electric \$7677). There was evidence of correspondence from the Navy's architect/engineer representative that directed Sollitt to change the fire alarm system in Building 2B. SE 2006 (Jupiter Electric letter referencing June 23, 1996 Guernsey memorandum changing fire alarm system).

Defendant attempted to prove that the fire alarm system “changes” were already included in the specifications for Building 2B, but the evidence on this issue showed that those specifications did not encompass the more expensive type of system to which Jupiter Electric referred in its subsequent bill to Sollitt. *See* Tr. at 960 (Mr. Zielinski) (describing the changes as “[g]enerally, Building 2B now becomes a hard wired fire alarm system”); Tr. at 3049 (Lt. Odorizzi) (agreeing that a fire alarm system described as a “hard wired” system is more expensive); SE 2006 (Jupiter Electric July 2, 1996 letter predicting additional costs and referencing the “result of a change to the fire alarm equipment from an addressable system to a hard wired system on June 23, 1996”); JE 94 Part B § 16722 ¶ 2.1.1 (specification showing that the original system design was an “addressable” system).

Because the Navy changed the fire alarm system in Building 2B to a more expensive system, the Navy is liable for the reasonable value of the added work. Jupiter Electric’s bill for \$7677 appears to be reasonable. Sollitt also claimed costs for its own work on this issue, which was time spent by Mr. Zielinski in facilitating the design change implementation. Tr. at 960 (Mr. Zielinski); SE 373 (itemizing meeting times with the Guernsey representative and “field coordination w/sub”). Mr. Zielinski’s time for duties of this nature is also charged in Sollitt’s field overhead costs for any of Sollitt’s own work that may have been performed during the same time and that was reimbursed, JE 231 at 9-10 (DCAA audit), and because the dates of his facilitation are not reported with any certainty, the court finds Sollitt’s own work costs for this issue to be uncertain and speculative and will not allow them. Sollitt’s reasonable costs for this work are thus \$7677, plus stipulated markups. The reasonable value of the fire alarm system revisions for Building 2B is \$8684, and Sollitt is awarded this amount for CX 306.

T. CX 315: Drywall Repair for Relief Air Revisions

Sollitt claims that there were additional drywall repair costs associated with the Building 122 relief air revisions described in Count XI, for which the Navy was found liable. Sollitt’s initial cost proposal for that work expressly “excluded patching,” SE 163 (CX 202), which is the claim here in CX 315, SE 291. The proof that Sollitt submitted with its cost proposal CX 315, *id.*, includes a subcontractor bill for work described as “cut-out/remove gypsum board/frame openings,” which are the related costs of patching walls after the relief air revisions were accomplished. Because the Navy was liable for the relief air revisions, and because Sollitt’s stipulated payment to its subcontractor of \$736, SE 2007 at 5, was reasonable for work required by the relief air revisions, Sollitt is entitled to payment for this work. After stipulated markups, SE 2007 at 1, are applied to \$736, the reasonable value of this work is \$833. Sollitt is awarded \$833 for CX 315.

U. CX 319: Cost for Navy Utilizing Sollitt’s Dumpsters

Sollitt claims that the Navy utilized some of Sollitt’s dumpsters and also left rubbish to be removed by Sollitt, so that Sollitt incurred labor and dumpster costs for which it is entitled to reimbursement. For proof, Sollitt offered a complaint letter dated August 15, 1996, alleging these facts in one sentence. SE 296 (CX 319). Sollitt also offered an estimate of costs incurred, prepared several

months later by Mr. Zielinski on April 10, 1997, which stated that seventy-two hours of labor and two dumpster rental amounts were chargeable to the Navy for this issue, although no specificity was included as to when this labor occurred or how much waste volume was represented by the dumpster charges. SE 371 (attachment to CX 319 of April 11, 1997). Sollitt has proved neither liability nor reasonableness of costs for this issue.

Sollitt referred to this issue as a differing site condition, Sollitt Br. ¶ 339, but has made no attempt at proving a Type I or Type II differing site condition claim. It is possible that Sollitt is pursuing an adjustment based on purely equitable grounds not tied to any contract provision. Sollitt did provide credible testimony that some of the Navy's follow-on contractors left boxes in Sollitt's dumpsters in the summer of 1996. Tr. at 965-66 (Mr. Zielinski). The Navy, however, argued that Sollitt had used some of the Navy's dumpsters without authorization during the course of construction. Def.'s Br. at 77. The court cannot determine from the record which party was more at fault in using the other's dumpsters. Sollitt bears the burden of proving liability for its equitable adjustment and has not done so.

The estimate of dumpster charges and rubbish removal costs prepared by Mr. Zielinski after the fact lacks specificity and credibility. Lt. Odorizzi testified that he received one complaint call about packing boxes in Sollitt's dumpsters, but that he was unable to verify the facts of the complaint because he was told that the dumpster had been emptied before Mr. Zielinski made the call. Tr. at 2677, 2683. It appears that the Navy did not have timely notice of the problem which would have allowed the Navy, and the court, to determine the extent of the dumpster misuse. Because the record does not establish the Navy's liability for or the reasonable costs for the work alleged in CX 319, Sollitt cannot recover any monies for CX 319.

V. CX 349: Relocate Transformers Despite RFI 206 Response

Sollitt claims that it was directed by the Navy's architect/engineer representative to relocate two transformers which had already been installed, and now claims that it is entitled to reimbursement for this work. This claim is not supported by the preponderance of the evidence presented by the parties. The Navy's response to Sollitt's RFI 106, which notified the Navy that Sollitt had installed two transformers in a location that "will not meet code requirements," GE 1030 (RFI 106), was that Sollitt was to leave the transformers in place, *id.* Sollitt relocated the transformers, against Lt. Odorizzi's direction not to do so. *See* Tr. at 1369 (Mr. Zielinski) (stating that "apparently I must have misread [Lt. Odorizzi's] direction because I thought he wanted it moved").

The response to RFI 106 is not unclear, and specifically rules out relocation work. GE 1030. On March 19, 1997, Mr. Zielinski wrote a letter to its subcontractor that reviewed an invoice for the relocation work claimed in CX 349 and stated:

We [Sollitt] have reviewed your invoice . . . and have found no substa[ntia]tion for a Change Order. Referenced in your proposal is

RFI #106. RFI #106 directs Jupiter Electric not to relocate the transformers

SE 349. The Navy is not liable for the relocation work, because the Navy reviewed Sollitt's request for direction and responded within three days, GE 1030, and gave direction to Sollitt to leave the transformers where they were. Sollitt is awarded no monies for CX 349.

W. CX 352: Complete Miscellaneous Electrical Work in Building 122 Area C Room 154

Sollitt asserts that Lt. Odorizzi directed Sollitt to add electrical work in Room 154 of Building 122 Area C. Sollitt Br. ¶ 346. At trial, Lt. Odorizzi had no memory of a conversation he is alleged to have had with Mr. Zielinski on this topic, Tr. at 2697 ("I can't recall providing direction. I can't say that I didn't . . ."), but Mr. Zielinski gave a credible description of the conversation where the electrical work in Room 154 was discussed, Tr. at 981-82 ("I believe Lieutenant Odorizzi said that you couldn't have a room without these kinds of things and it was manifestly necessary and he directed me to add these devices."). Sollitt claims that its subcontractor added "additional switches, receptacles, lights and wir[ing for] an electrical heater in Room 154," pursuant to this direction. Sollitt Br. ¶ 346. Of the miscellaneous electrical work described in CX 352, however, only certain items were proved to be work added by the Navy to the bid-based contract work.

Jupiter Electric, Sollitt's electrical subcontractor, wired the electric heater in Room 154. SE 342 (CX 352). The electric heater was on the mechanical drawings for this room, but wiring for this heater had been omitted on the electrical drawings. Tr. at 1375 (Mr. Zielinski). Providing electricity for an electric heater is manifestly necessary. It is undisputed that the standard Department of Defense construction contract clause titled "Contract Drawings, Maps, and Specifications," 48 C.F.R. § 252.236-7001(d) (1994), was part of this contract, and this clause places the burden on the contractor to correctly install "manifestly necessary" work items, despite omissions or mistakes in contract drawings. This provision states that "[o]missions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the contractor from performing such omitted or misdescribed details of the work, but shall be performed as if fully and correctly set forth and described in the drawings and specifications." 48 C.F.R. § 252.236-7001(d). Wiring the heater was not changed or added work, because it was work required by the contract as bid.

Jupiter Electric also provided and wired two "receptacles," which appear to have been duplex electrical outlets which receive electrical cord plugs. SE 342; Def.'s Mem. at 120. It is undisputed that the receptacles were on the electrical drawings and were required by the contract. Def.'s Mem. at 120; Tr. at 1375 (Mr. Zielinski) (reviewing the Navy's reasons for rejecting the claim for these items shown on the contract electrical drawings and commenting "how [the receptacles] got in [CX 352], I'm not so sure about that part"). The receptacles were not a change to the contract, either.

But the lights in Room 154 and the switch to operate the lights were added by Lt. Odorizzi's direction. Tr. at 1375 (Mr. Zielinski) (stating that Lt. Odorizzi gave direction on the heater wiring and then "he threw in that we had to have the light and the switch hook up, too"). The lights and switch were not on any of the contract drawings, Def.'s Mem. at 121, and the evidence does not show that these were manifestly necessary, Tr. at 1374 (Mr. Zielinski) (stating that Room 154 was a small corner room); Def.'s Mem. at 120 (stating that Room 154 contained mechanical and plumbing lines which required heat, but not stating that Room 154 necessarily required permanent light fixtures). Because the Navy added the lights and switch, the Navy is liable for the cost of this added work.

The underlying documents for CX 352 are not sufficiently detailed to allow the court to determine exactly which of the material and labor costs cited therein are related to lights and switches, and which are related to costs for which the Navy is not liable. See SE 342. But the Jupiter Electric documents underlying CX 352 do indicate that six work items required two electricians for three workdays; of these six work items, three are related to lights and the switch to operate them. *Id.* Also, the material costs for the lights appear to be among the more expensive items in the subcontractor's bill. *Id.* For these reasons, the court is satisfied that approximately half of the costs claimed in CX 352 are reasonable costs for the material costs and installation costs of the lights and switches for Room 154, for which the Navy is liable. Sollitt claimed \$2197 for CX 352, a figure which was supported by its stipulated payment to Jupiter Electric of \$1943, SE 2007 at 6, and its stipulated markups for profit, overhead and bond premium, SE 2007 at 1. Sollitt is awarded \$1099, or about half of what Sollitt claimed, for CX 352.

X. CX 355: Repair Frozen Coil in Building 2B Air Handler

The evidence submitted in support of this claim was confusing and not persuasive. First, Sollitt refers several times to CX 355 as pertaining to work done on Building 122, not Building 2B. See SE 2007 at 6 (showing stipulated CX 355 payment to Landis & Gyr to "Repair Frozen Coil in Building 122 Air Handler"); Sollitt Br. at 109 (title of CX 355 claim refers to Building 122, not Building 2B). Yet, all of the testimony and subcontractor documentation on this issue concerns Building 2B. Tr. at 986, 1379 (Mr. Zielinski); SE 356 (CX 355). Second, although Mr. Zielinski described CX 355 as being related to frozen coil incidents on December 26, 1996 and January 13, 1997, Tr. at 986, the CSM Mechanical bill for work done on those dates to "repair heating coil," SE 356, is not the work for which Sollitt is currently requesting payment. Sollitt Facts at 84. Instead, Sollitt's claimed costs for CX 355 of \$1724 are mostly attributed to Sollitt's own work for "service calls and repair coordination," SE 356 (showing subtotal of \$969 for Sollitt's own work), and a lesser amount of \$580 for sixteen hours of "fitter" labor by Landis & Staefa with no specified dates, *id.*, with added markups for overhead and profit, Sollitt Facts ¶ 576. Upon this record, Sollitt has not shown that its claimed costs for CX 355 are reasonable, because the underlying documents for CX 355 and the testimony regarding the frozen coils are inconsistent with Sollitt's claimed costs.

Third, the Navy's liability for this work was not proved. Opposing theories were presented as to why the coils froze, and as to who was responsible for the damage caused. *See, e.g.*, Tr. at 986 (Mr. Zielinski) (stating that "[o]ur information reported that the reason the coil froze is that somebody closed the steam valve"), (Lt. Odorizzi) ("The outside air damper was not properly calibrated in terms of when it was supposed to open and when it was supposed to close. Thus, it allowed freezing air to come in and caused the coil to freeze."). Neither theory was a clear winner.

Mr. Zielinski initially gave the impression that all this trouble occurred six months after Sollitt had completed work at NTC, Tr. at 986, but he later testified that Sollitt might have been doing warranty and "punch-list" work in Building 2B at the time the coil froze, Tr. at 1377. Thus, the "somebody" who might have left the steam valve closed is an open question. There was no persuasive evidence as to who might have been responsible for a closed steam valve.

There may have been continuing problems with "calibration," which would support Lt. Odorizzi's theory. *See* SE 356 (CSM Mechanical's bill for work done on January 13, 1997) (stating that the work included "check freeze STPT sequence" and "check operation of HTS water coil control valves"). Also, the Navy presented an argument that Sollitt had continuing responsibility for a fully operational heating system at the time the coil froze, Def.'s Mem. at 121-22, and this argument was not rebutted. For all of these reasons, the court cannot determine what caused the frozen coils, nor can it determine who was responsible. Sollitt did not meet its burden to show that the Navy was liable for the costs claimed in CX 355, or that the costs claimed for this work were reasonable. Sollitt is awarded no monies for CX 355.

XV. Count XVI: Interest on Invoice Payments Which the Government Disputed

In Count XVI, Sollitt seeks Prompt Payment Act, 31 U.S.C. §§ 3901-3907, interest for "delayed payment of the amounts retained by the Navy from Sollitt's monthly payment requests." Sollitt Br. at 110. This claim is predicated upon this court finding that "Sollitt is entitled to the extensions of time it seeks in this case," Sollitt Supp. ¶ 1. The court did not grant any time extensions to this contract. Because Sollitt was not granted any time extensions to the contract period by this court, its claim for interest penalties on payments delayed by contract completion is seriously undermined.

Even if Sollitt had been granted an equitable adjustment extending the time of contract performance, it still would not be entitled to Prompt Payment Act interest for the delayed or withheld payment of portions of its monthly invoices. Sollitt alleges that the Navy delayed or withheld payments of Sollitt's monthly invoice amounts for two reasons: "anticipated liquidated damages" and "delayed performance." Sollitt Br. at 110. The retention of liquidated damages is clearly evidenced in the record of invoice payments, *see, e.g.*, Sollitt Supp. Tab 10 at 572, and the court notes that this retention constitutes the Navy's assertion of a dispute over its liability for these withheld amounts. Although the alleged "delayed performance" retention is less clear from the record, perhaps because Sollitt elicited no testimony on this issue that was identified as pertaining to Count XVI, any retention due to delays in

contract performance also evidences a dispute between the parties as to when the Navy was liable for certain portions of Sollitt's monthly invoices. Disputed contract payment amounts are subject to Contract Disputes Act interest, 41 U.S.C. § 611, not Prompt Payment Act interest. *E.g., Gutz*, 45 Fed. Cl. at 298. Because Prompt Payment Act interest is not applicable to Sollitt's claims in Count XVI, no recovery may be had under the legal theory presented in Count XVI.⁶⁰

XVI. Count XVIII: Loss of Potential Contract Award Fee

Pre-award Amendment 0007 provided for \$600,000 as a performance award fee for Sollitt if it “compli[ed] with contractual requirements and performance at the satisfactory level in each of the individual criteria set forth in the specification.” JE 28 § 01010 ¶ 1.7.1(a). Five time periods for the evaluation of contract performance were set by the contract, with a specific maximum award fee “pool” available for each period, and the contract also specified that no potential award monies from one evaluation period pool could carry over to another period. *Id.* ¶¶ 1.7.1(a)-(b). Although the terms “unilateral” and “discretion” are not included in the contract language, the plain meaning of the description of the evaluation process, as excerpted here, makes it clear that the award fee decision was agreed to be unilateral and discretionary on the part of the government:

The Contractor's failure to maintain acceptable levels of performance in all areas of this contract, whether specified as award fee areas or not, will result in no award fee being issued.

.....

A Fee Determination Official (FDO) will be appointed to determine the amount of award fee, if any, to be pa[i]d to the Contractor. . . . The decision of the FDO is final and shall not be subject to the Disputes Clause.

Id. ¶¶ 1.7.1(a), (c).

Any changes to the award fee determination criteria which shall apply during each award fee period will be provided to the Contractor in writing by the Contracting Officer at least fifteen (15) calendar days prior to the start of each award fee period.

.....

A rating below satisfactory in any of the individual criteria will result in *no award fee* pa[i]d to the Contractor.

JE 23 § 01010 ¶¶ 1.7.1(d)-(e) (Pre-award Amendment 0002). Because unilateral discretion was

^{60/} In Count XIX, interest provided by 41 U.S.C. § 611 is awarded for all of the claims upon which Sollitt recovered, including unjustly withheld liquidated damages.

granted to the Navy in determining the award fees for the five evaluation periods, the court reviews the award fee determinations based on Sollitt's contract performance to see if these determinations were arbitrary or capricious. *Burnside-Ott*, 107 F.3d at 860.

Sollitt does not contest the award fees issued for Periods One and Two, but argues that Sollitt's performance for Periods Three, Four and Five was "unfairly and improperly evaluated." Sollitt Br. at 114. For each of these three evaluation periods Sollitt received zero dollars in performance award fees. *Id.* ¶¶ 364-65. Sollitt asks the court to review the merits of the government's decision on the grounds that timeliness was the primary criterion, *id.* at 113 ("The contract provided certain criteria for determining Sollitt's entitlement to the Award Fee, the primary one being timeliness of performance."), and that this criterion was unfairly rated, in Sollitt's view, because "the Navy, rather than Sollitt, was the cause of the delayed completion of the [p]roject." *Id.* at 114. The court rejects this line of argument.

First, the government's award fee determination is not reviewable on the merits. *Burnside-Ott*, 107 F.3d at 860. Even if it were, timeliness of performance appears to be only one of four criteria specified in the contract, and there is no proof that timeliness was the primary criterion. *See* JE 23 § 01010 at 6-8 (showing four criteria of performance: timely performance, quality of work, management, and community issues, but showing no weighting of these criteria). In addition, delays of both parties to the project were concurrent and intertwined, so it is not clear that Sollitt would have received a satisfactory score for timeliness even if the Navy delays had not occurred. For example, a sub-part of the timely performance criterion stated that "[p]rogress schedule has been submitted and approved in accordance with the provisions of the contract and accurate updated progress schedules have been submitted with each invoice thereafter." *Id.* at 6. The court notes that Sollitt's contract performance was deficient in this area. For all of these reasons, the court rejects Sollitt's argument that the award fees of Periods Three, Four and Five were improper because of negative ratings in timeliness. The court finds that the Navy's evaluation of Sollitt's contract performance was not arbitrary or capricious.

Sollitt also attempted to prove that the Navy's award fee determinations were, in one instance, procedurally irregular. Sollitt claims that because the Navy removed \$70,000 from the Period Three award fee pool on March 29, 1996, the Navy breached a contract term regarding the evaluation process. If this was a material breach, however, it was excused by Sollitt's prior material breach. *See Christopher Village, L.P. v. United States*, 360 F.3d 1319, 1335 (Fed. Cir. 2004) ("The contract law question is whether [a plaintiff's] established and uncontroverted breach was sufficiently material so as to justify the government's subsequent breach.").

Period Three began 236 days after the contract award, and ended 345 days after the contract award, and had \$175,000 in its award fee pool. JE 28 § 01010 ¶ 1.7.1(b). Period Three, according to the court's calculation, started on October 21, 1995 and ended on February 7, 1996; these dates are confirmed by the Navy's report to Sollitt of the award fee for this period. *See* JE 205 (award fee determination letter of October 15, 1996) (stating that the start date of Period Three was October 21, 1995 and that the end date reflects that "[t]his Award Fee Period Three was to coincide with

completion of Phase [I],” which was originally scheduled for February 7, 1996). Part of the award fee evaluation process included a self-evaluation by Sollitt, due fifteen calendar days after the end of each evaluation period. JE 28 § 01010 ¶ 1.7.1(c). Sollitt’s self-evaluation for Period Three was dated April 19, 1996, almost two months late. SE 193.

So, although the FDO fee award determination normally would consider Sollitt’s self-evaluation beforehand, JE 28 § 01010 ¶ 1.7.1(c), this self-evaluation was late. The FDO was also authorized by the contract to “take such other action and consider such other facts pertinent to the Contractor’s performance as is required to determine the adjective rating and the amount of the performance award fee for the evaluation period under consideration.” *Id.* In light of Sollitt’s late self-evaluation, the Navy’s action to remove a portion of the pool available to Sollitt for Period Three at the end of March 1996, before receiving Sollitt’s self-evaluation three weeks later, is not improper. At this point in time, the FDO had sufficient data to predict that the “timely performance” criterion was not going to be rated satisfactory, and this alone would necessarily trigger the contract provision mandating a zero award fee for Period Three. *See* JE 28 § 01010 ¶ 1.7.1(e) (“A rating below satisfactory in any of the individual criteria will result in *no award fee* paid to the Contractor.”). In fact, for Period Three Sollitt eventually received unsatisfactory or marginally satisfactory ratings for three out of the four criteria, JE 205, and any one of these below satisfactory ratings would have been enough to deprive Sollitt of all of the \$175,000 in the pool. Although the FDO was not following the evaluation process to the letter, his action is excused by Sollitt’s material breach of submitting a late self-evaluation and thus was not arbitrary or capricious.

Because the Navy’s determination of performance award fees was not arbitrary or capricious, Sollitt’s claim for additional performance award fees fails.

XVII. Count XIX: Interest on Sollitt’s Successful Claims

Although Sollitt alleges that Prompt Payment Act interest applies to “all unpaid claims addressed in this brief and for which the Court finds entitlement in favor of Sollitt,” Sollitt Br. at 115, the claims upon which Sollitt prevails are subject only to Contract Disputes Act interest, 41 U.S.C. § 611, as discussed in Count XVI, because Sollitt’s claims were disputed by the Navy. *See* 31 U.S.C. § 3907(c) (not requiring a Prompt Payment Act interest penalty where the government disputes its liability for payment, and indicating that such disputed claims are subject to the CDA interest provision). According to 41 U.S.C. § 611,

[i]nterest on amounts found due contractors on claims shall be paid to the contractor from the date the contracting officer receives the claim pursuant to section 605(a) of this title from the contractor until payment thereof.

Id. Sollitt filed its CDA claim with the Navy’s contracting officer on October 3, 1997. Thus, CDA

interest, as provided under 41 U.S.C. § 611, begins to run on October 3, 1997 and ends on the date of the government's payment to Sollitt of the sum awarded in the judgment detailed below.

CONCLUSION

For the reasons set forth herein, it is hereby **ORDERED** that:

- (1) Defendant's Motion in Limine, filed July 7, 2003 is **DENIED** as stated at trial.
- (2) Plaintiff shall be **AWARDED** an equitable adjustment increasing the Navy's contract payment responsibility by \$551,056, as shown in the calculation below.

Count I, Phase I:	\$ 89,600
Count I, Phases II and III:	\$145,600
Count VI:	\$ 809
Count VII:	\$ 72,612
Count VIII:	\$ 17,565
Count IX:	\$ 3,020
Count X:	\$ 6,898
Count XI:	\$ 615
Count XIV:	\$ 2,038
Count XV:	

CX 18	\$156,616
CX 47	\$ 615
CX 91	\$ 5,375
CX 103	\$ 9,825
CX 120	\$ 6,734
CX 149	\$ 545
CX 165	\$ 11,695
CX 208	\$ 819
CX 257	\$ 9,459
CX 306	\$ 8,684
CX 315	\$ 833
CX 352	\$ 1,099

TOTAL	\$551,056
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- (3) Additionally, plaintiff shall be **AWARDED** interest on \$551,056 from October

3, 1997 until it receives payment for this judgment, at a rate determined by 41 U.S.C. § 611.

- (4) The Clerk is directed to **ENTER** final judgment for plaintiff in the amount of \$551,056, plus interest.
- (5) No costs.

LYNN J. BUSH
Judge