

Including the allowance for overhead and profit, TA's damages for extended project management costs are calculated as follows:

EXTENDED PROJECT MANAGEMENT COSTS	
Unadjusted Gross Cost for Extended Project Management	\$49,000.00
Original Scope Remaining as of February 2012	-\$3,429.00
Adjusted Gross Cost for Extended Project Management	45,571.00
10% Overhead	\$4,557.10
5% Profit	\$2,278.55
Damages for Extended Project Management	\$52,406.65

(Table 4)

For the same reasons set forth in the analysis of the extended general conditions any additional bond premium is not compensable. Accordingly, it is recommended that TA be awarded \$52,406.65 as damages for extended project management costs.

4. Extended Equipment Rental Costs.

McCarthy attributes \$34,351.92 to extended equipment costs that were incurred during the Extended Period, but such equipment is not identified as to what, why, when and how it was used during the Extended Period. After hearing Englehart's testimony and reviewing his initial and supplemental reports, the court concludes that TA has not met its burden of proof on these damages, for as Englehart pointed out, there were many items claimed that did not fall into the delay period for which those costs are sought as damages. TA did not dispute this. Without the corresponding back-up

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invoices the court cannot determine the amount, if any, TA incurred for extended equipment rental costs during the Extended Period with reasonable certainty.

Accordingly, it is recommended that TA not be awarded damages for extended equipment costs.

5. Unprocessed Change Order & Scope Adjustments.

The release language of the change orders executed by the parties was discussed in detail above. The release language was not pled as a defense and is therefore waived. Also, unless OSFC can connect a claim for costs for changed work to a specific change order, the release would not apply to such a claim. OSFC made no such connection in its defense.

With respect to the summary submitted by TA as Exhibit TA-0734, TA seeks damages of \$603,392.71 for what it describes as additional costs incurred for discrete changes not included in a change order. Wilhelm testified that he derived the hours in the summary from cost reports and superintendent field notes. Wilhelm also testified that he was not permitted to include any of these costs in change order pricing. Yet, the Contract does permit TA to submit such costs in response to an RFI, pricing request or field work order (JX-B/16, GC 2.2.3 and JX-B/49, GC 7.2). TA also could and should have proposed pricing and a change order for these discrete changes under GC 7.2.3.1, but apparently it did not. If TA failed to include these costs in its pricing or a proposed change order it was not because it was not permitted to do so. Costs incurred for a change in the work without prior written authorization are waived (JX-B/49, GC 7.1.2.1). These costs, according to TA, were discrete and yet they were not included in TA's certified claim filed on March 8, 2012 or in the supplemental certified claim filed on November 7, 2012 (TA-0659-005). These changes and their related costs were never

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certified by TA.⁹⁷ Moreover, when McCarthy filed his supplement expert report in this action dated October 24, 2014, these costs were not included.⁹⁸

A review of the record indicates that the categories of work described in TA-0734 and as indicated by Wilhelm during his testimony, related entirely to rough carpentry work. At trial Wilhelm estimated that TA expended an average of 926 hours per dorm on this additional work. At the rate of \$41.77 per hour, this additional work cost TA \$38,679.02 per dorm, or a total of \$464,148.24 for 12 dorms. This amount would be reflected in the JCR, although the individual costs are not segregated. These costs will be considered in calculating TA's loss of productivity for rough carpentry labor, but because TA did not request a change order for these costs prior to doing the work, the court does not recommend an award of damages for discrete changes as summarized in TA-0734.

Wilhelm also testified about outstanding amounts owed for unprocessed change orders and scope modifications. In support of this claim he authenticated TA-0659-019, a summary of unprocessed change orders, and testified that TA had not been issued a change order for this change of scope. The flooring work credit was due to OSFC removing flooring from the scope of TA's contract. According to Wilhelm, TA delivered the materials to the site and performed the floor preparation, but could not install the flooring because the moisture content in the slab tested above the manufacturer's requirements (TA-0566). TA was not responsible for conditioning the building. Smith

⁹⁷McCarthy commented on these discrete change orders in his initial report, but provided no basis for recovery, and in fact admitted they were not included in the Supplemental Certified Claim (TA-1200/96).

⁹⁸McCarthy stated the following in his supplement report:

"The original certified claim amount totaled \$3,048,294.13 and was broken down into the following categories as shown on the summary below. Based on this forensic schedule analysis, the following adjustments have been made to the previously submitted certified claim."

McCarthy did not include the costs summarized in TA-0734 in the categories as shown below this statement.

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disputed the moisture issue and testified that he engaged an independent testing agency to conduct moisture testing who found it within specifications. However, he admitted that he did not test in the same area and that the solution was as indicated by Wilhelm, that the labor to install the flooring would be taken out of TA's scope of work. The only evidence offered by OSFC on the cost of this deduct change were unsigned change orders purporting to be deduct change orders for flooring work. An unsigned change order does not modify the Contract. There was no evidence that OSFC followed the Contract change order procedures for deduct change orders to deduct the cost of labor for installation of the flooring from TA's Contract. The court finds that based on the evidence submitted, \$6,938.04 was the reasonable cost of work removed from the Contract. The court will consider this deduction in calculating the balance owing under the Contract.

The court also finds that there is insufficient evidence to determine either entitlement to or the amount of damages for changes to TA's door hardware scope of work. There was no evidence of field work orders or pricing submitted in response to RFI #316 or any explanation of such pricing sufficient to support an award of damages.

6. Loss of Productivity for Rough Carpentry.

TA claims damages of \$1,320,299.99 for loss of productivity associated with its rough carpentry work on the Dorm Project. To support its claim for loss of productivity, TA presented testimony of TA personnel, SHP and LL personnel, OSFC personnel, expert witnesses, contemporaneous project records, including communications and notices between TA and OSFC/LL, and the expert reports and testimony of McCarthy who gave opinions on the cause and effect of various impacts to TA's rough carpentry work. To calculate TA's loss of productivity to its rough carpentry work, McCarthy developed what he described as a "measured mile" analysis.⁹⁹ OSFC's expert,

⁹⁹This method is favored when the data is available and a reasonable comparison can be made between substantially similar impacted and unimpacted activities. See Bruner & O'Connor on Construction Law, Vol. 5, §15:115, "[b]ecause of the difficulty of proving the reasonableness of the

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Englehart, contends that McCarthy's measured mile calculation of TA's damages for loss of productivity is flawed and therefore not reliable.¹⁰⁰

The measured mile method has been generally accepted in both federal and state courts, including Ohio, to prove and calculate damages resulting from loss of productivity. *J&H Reinforcing & Structural Erectors, Inc. v. Ohio Sch. Facilities Comm'n*, 2013-Ohio-3827 (10th Dist.). While there is no precise formula for a measured mile analysis, certain criteria have evolved over the years.

First and foremost, a measured mile analysis should present as accurately as possible an "apples to apples" comparison of labor expended on impacted versus unimpacted work. Because the cost of impacted (disrupted and inefficient) work is being compared to the cost of similar unimpacted¹⁰¹ (not disrupted and efficient) work, i.e. the "measured mile," it is necessary that the comparison be of sufficiently similar (not identical) activities.¹⁰² Second, the supervision and conditions within the control of the contractor must be consistent between the impacted and unimpacted activities, or if

precontract bid estimates in relation to the myriad variables that actually may affect labor productivity during performance, the measure viewed judicially as most acceptable for proving loss of productivity damages is the 'measured mile' method."

¹⁰⁰Although Englehart took issue with almost every aspect of McCarthy's analysis, the real issue is whether McCarthy has demonstrated a reasonably sufficient "apples to apples" comparison to support an award of damages with reasonable certainty, and if not, may the court nevertheless consider McCarthy's analysis in conjunction with the court's review of the evidence in determining the damages with reasonable certainty by other means.

¹⁰¹For purposes of this discussion, the terms "unimpacted" and "least impacted" are used interchangeably.

¹⁰²Because all work was impacted by inadequate plans, poor construction administration by both the architect and construction manager and the schedule as well as TA's own shortcomings, McCarthy chose what he determined was the least impacted rough carpentry window of activity for the measured mile analysis. McCarthy's "least impacted" baseline for comparison actually benefits OSFC in the analysis because it was not discounted and would therefore come at a higher cost than a fully unimpacted period. Here, the measured mile for rough carpentry consisted of four elements of the work: exterior/bearing framing (OSD2); interior framing (OSD2); trusses/sheathing (OSD3); and bulkhead framing (OSD2). McCarthy selected the measured mile data from a combination of OSD 2 and 3 because he determined them to be the "least impacted" rough carpentry activities of all the dorms.

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not consistent, reasonable allowance must be made. Third, the analysis must take into account inefficiencies or other impacts caused by the contractor itself or outside forces (e.g. weather) which are the risk of the contractor during the performance of the impacted activity. And last, there must be a reasonably sufficient financial accounting and other data pertaining to both the impacted and unimpacted activities to quantify the difference. When it is demonstrated by the greater weight of the evidence that a breach of contract has occurred impacting the productivity of the contractor's work, the calculation of damages need not be precise, but may instead be calculated with reasonable certainty. *Tri-State Asphalt Corp. v. Ohio Dep't of Transp.*, supra.

The measured mile method is but one way to prove damages resulting from loss of productivity and it is favored when it is supported by credible evidence. However, other methods have also been used with success and upheld by the courts. For example, the "total cost method" compares the contractor's bid estimate with its actual costs, taking into consideration the reasonableness of the bid, the reasonableness of the actual costs, who and what caused the damages and the impracticability of proving actual losses directly. This is probably the least favored method of calculating damages because it makes no allowance for impacts caused by the contractor over which the owner had no control.

A jury verdict was upheld following this process in Ohio and the court explained as follows:

The fifth jury interrogatory asked whether CCI proved, by a preponderance of the evidence, that they satisfied the elements that would entitle them to recover under the "total cost" or "modified total cost" method of computing damages. (Record, at 265.) Under the "total cost" method, a contractor's damages are the difference between actual costs and the original bid. *Net Constr., Inc. v. C & C Rehab. & Constr., Inc.* (E.D.Pa. 2003), 256 F.Supp.2d 350, 355 (citing *Phillips Constr. Co. v. United States* (1968), 184 Ct. Cl. 249, 394 F.2d 834). In order for CCI to be able to use the total cost method, the jury had to determine: (1) that it was impossible or highly impracticable for them to prove their actual losses directly; (2) that their

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bid was reasonable; (3) that the actual costs they sought from PERS were reasonable; and (4) that PERS' breach(es) were the sole cause of CCI's damages. After hearing all of the evidence in the case, the jury answered "yes" to all of these questions. PERS failed to object to the interrogatory when it was given, and waived error as to the interrogatory that was used. PERS' argument is more properly characterized as a manifest weight argument and seeks to have this court reweigh the evidence as to each element of the total cost method. For example, there was evidence presented on both sides of the issue as to whether CCI met each element. Both sides called experts who testified as to this matter. The jury had the right to believe or reject any or all of this testimony. This was not a case of jury nullification but rather a case where the jury credited the testimony of CCI's witnesses over those of PERS.

Cleveland Constr., Inc. v. Ohio Pub. Emples. Ret. Sys., 2008-Ohio-1630, ¶ 39-40 (10th Dist.).

This court has also used the "modified total cost method" to prove a contractor's damages resulting from delays, a method that was upheld on appeal. *Cleveland Constr., Inc. v. Kent State Univ.*, 2010-Ohio-2906 (10th Dist.), ¶¶ 55-60. While the first three elements outlined by the court in *Ohio Pub. Emples.* for a total cost claim must be satisfied, when using the modified total cost method a claimant is not required to prove that the defendant's breach was the sole cause of the claimant's damages, but instead it must prove that the breach contributed to the loss of productivity and it must deduct any damages caused by the claimant. Using the modified total cost method, a court can also adjust the contractor's estimate for the work before it is impacted. *Neal & Co. v. United States*, 36 Fed.Cl. 600, 638 (1996).

Regardless of which approach is used to calculate damages, when a court is confronted with a claim for loss of productivity, it should apply whatever method will, in the court's view, best adhere to the following:

Where a right to damages has been established, such right will not be denied merely because a party cannot demonstrate with mathematical

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certainty the amount of damages due. *Geygan v. Queen City Grain Co.* (1991), 71 Ohio App.3d 185, 195, 593 N.E.2d 328.

and,

The Special Master appears to have again used his expertness to come up with what he considered a just approximation of a proper award. We, however, are satisfied that there was evidence which raised the Masters' calculations above mere speculation, and as findings of fact they were found by the District Judge not to be clearly erroneous. We do not find reversible error in the District Judge's conclusion. He followed the familiar rule that, where one's right to damages is established, his right will not be denied even though a calculation of damages cannot be accomplished with mathematical exactness.

Burns Bros. Plumbers, Inc. v. Groves Ventures Co., 412 F.2d 202, 208-09 (6th Cir. 1969).

A court is not bound to adopt expert opinion when it comes to determining whether loss of productivity was caused by an owner's breach of contract and if so, the resulting damages, but it may choose to do so. As previously noted:

In the present case, the issue as to the cause, the fault, and the effect of the delays in the construction project, whether attributable in whole or in part to the owner, the architect, or the contractor, was not a matter which was highly technical, scientific in nature, or beyond the experience or knowledge of the average jury.

Jurgens Real Estate Co. v. R.E.D. Constr. Corp., 103 Ohio App.3d 292, 298, 659 N.E.2d 353 (12th Dist. 1995).

Accordingly, while considering all of the evidence, the court not only gave careful consideration to the expert reports (TA-1200 and TA-1201; Defendants Exhibits ZZ and AAA) and testimony of McCarthy and Englehart, but also to the contemporaneous project records including the JCR, TA's supplemental certified claim (TA-0659), including its backup documentation (TA-0592), and particularly the original

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estimate/schedule of values, bid sheet, and March 8, 2012 Claim Calculations (TA-0592 Backup Binder, TRANS000003-TRANS000089) and timesheets (TA-0592 Backup Binder, TRANS001199 - TRANS001665).

Based on this review of the evidence the court finds that TA's work, and in particular the rough carpentry, was severely disrupted by actions and inactions of OSFC and its authorized agents and that such disruption negatively impacted TA's rough carpentry labor productivity. Such actions and inactions are too numerous to list entirely, but this much is established by the greater weight of the evidence:¹⁰³

- without telling OSFC and before going out for bids in October 2010 for the Dorm Project, SHP/Berardi materially altered the plans that had been partially approved by DIC in July 2010;
- OSFC solicited bids in October 2010 for construction of the dorms by issuing plans that had not been approved by DIC;
- the Dorm Project suffered from poor design including numerous dimension flaws or lacking dimensions altogether that should have been included in the bid documents;
- before being awarded the Contract, TA sought and was promised a set of updated/revised drawings and was falsely told it would get them time and again, but never did and OSFC knew the plans were flawed;
- all of the contractors, including TA, struggled to understand SHP's inadequate construction drawings throughout construction, particularly during the critical first several months;¹⁰⁴
- internally LL viewed the plans as useless and worthless trash;
- TA was prevented from attending DIC inspections;

¹⁰³This list is not all-inclusive nor is it intended as such.

¹⁰⁴As shown in the Table 5, below, as the dorms were built, the design became better understood and could be replicated without the extent of disruption in the early stages, at least as reflected in the JCR summaries for each dorm and from a review of the contemporaneous project records.

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- TA was continually misled by LL and SHP about updating the plans and was, at times, bullied by the construction manager, all leading to a hostile and chaotic working environment;
- SHP regularly failed to adequately and timely respond to RFIs leaving TA to wait and wonder what to do next, or to move to a site where it could work until it received information from SHP;
- TA was forced to build the dorms with unapproved plans, sketches, and directives that were not incorporated into the plans, and which were often delayed;
- TA wasted time proving that its framing conformed to the specifications after being told that it did not; and
- TA was directed to perform work out of sequence and work that was not within the scope of its Contract, ultimately trying to adhere to an impossible completion date and poorly developed schedule.

TA was not required by the Contract to prepare a resource loaded schedule internally to track its costs on the job. This would have been helpful in creating a baseline for a measured mile analysis. Instead, McCarthy had to make assumptions based on TA's pre-bid estimate/buy out sheet and the bid schedule. OSFC's expert witness, Englehart, submitted two reports in this action. One (Defendant Exhibit ZZ) in response to McCarthy's initial expert report (TA-1200) and another (Defendant Exhibit AAA) in response to a supplemental report filed by McCarthy (TA-1201). At trial Englehart explained his view of the essential components of a measured mile analysis. He testified that to adequately compute damages using the measured mile method a court should consider whether:

- 1) the measured work (impacted vs. unimpacted) being compared is sufficiently similar, i.e. is there a true apples to apples comparison in terms of the activities being compared;

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- 2) the conditions under which the work is being performed in both the impacted and unimpacted areas are similar, including such things as temperature, environmental, e.g. access, etc.; and
- 3) the efforting and supervision is similar between the impacted and unimpacted work.

On the subject of supervision Englehart noted that TA had used up most of its management supervision allowance by April 2011. Englehart testified that he made this determination from the JCR ending September 30, 2012.¹⁰⁵ However, the original estimate for supervision was \$202,051.94 (TA-0659-44, cost code 01-420) and the supervision costs through August 2011 was only \$198,771.63.¹⁰⁶ From a review of the JCR, TA continued to provide consistent supervision through all of 2011 and 2012 as needed. So the supervision from a cost standpoint appears consistent even if it is far greater than TA estimated when it bid the job. Given the onerous conditions under which TA was forced to work it is no surprise that its supervision costs were higher. It had to increase its manpower substantially and it was working feverishly to try to keep up with a manipulated and unrealistic schedule. From a review of the evidence, when and to what extent TA used up its estimated costs for supervision is not fatal to McCarthy's analysis. TA is not seeking damages for supervision exclusive of the framing as part of its loss of productivity claim. Any supervision in framing (foremen) is included within the framing cost code and it appears from the project records that TA continued to furnish separately cost coded supervision throughout the rough carpentry activities.

¹⁰⁵To avoid confusion it should be noted that McCarthy's measured mile calculation was taken from the September 30, 2012 JCR, which reflects costs through September 14, 2012 (TA-1200/85; TA-0659/4).

¹⁰⁶The court recognizes that some rough carpentry supervision is included in the rough carpentry cost code, but it is integrated within the overall rough carpentry labor costs.

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Englehart testified that he had concerns about the quality and experience of TA's supervision and workers, but these concerns were mostly from information furnished by the project records or comments by others, most notably LL, which the court finds to be mostly biased to deflect attention from LL's own mismanagement.¹⁰⁷ From the court's review of the contemporaneous project records there is evidence that supervision did have an impact on TA's work, although not substantial when compared to the disruption and impacts caused by OSFC/LL/SHP. The court takes TA's supervision experience and quality into account when calculating loss of productivity damages. The court was impressed with the testimony of Wilhelm, the project manager for TA, and Deering, the carpentry foreman, both of whom provided supervision throughout construction and both of whom gave direct evidence of disruption and delays during construction caused by OSFC and its authorized agents.

Englehart also noted that there were labor costs that were excluded from the time associated with the installation of the trusses and quantified the exclusion as about 30% of the truss calculation. Again, this issue will be taken into account in the court's loss of productivity analysis below.

Englehart noted that there was rough framing labor (exterior/interior) that occurred after the measured mile cut-off date of July 5, 2011. According to Englehart, not including these additional labor hours/costs artificially deflates the measured mile and necessarily inflates the difference between the measured mile activities and the similar impacted activities resulting in inflated damages. This would only be true if the hours expended on those additional dates reflect a lower productivity unit cost. What McCarthy established in his baseline analysis is what TA's effort was in terms of man-hours achieved for installation of a defined number of lineal feet of exterior wall panel or interior framing during a specific as-planned period of time. He then converted that

¹⁰⁷The issue of turnover of supervisory personnel has already been addressed, but the court sees this as mostly a result of the difficult conditions under which TA was forced to work and most attributable to OSFC, not TA.

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measured effort to a unit cost. McCarthy then calculated the total lineal feet for each model for exterior framing and interior framing (total units/building type), applied his calculated unit cost to the total units and arrived at his baseline for each model (ES/MS and HS).¹⁰⁸ He did the same for the trusses/sheathing and bulkhead framing. Remarkably, McCarthy's baseline is very similar to TA's budget/estimate for the rough carpentry.¹⁰⁹

However, there is a fundamental problem with McCarthy's analysis. It does not identify and take into account the variable conditions encountered by TA during the baseline production, i.e. the measured mile, nor does it account for the same conditions when quantifying the cost of the impacted work. It also assumes that all worksites, scope of work and crews were substantially similar, and while that may be true as to the worksites and scope of work, the court could not make that determination with respect to the crews. Also, McCarthy admits in his analysis of the delay claim that TA had to rework portions of its work during performance under Recovery Schedule 2 and that the rework, described as "self-inflicted," delayed TA's progress by 14 days. The impacts of this rework was within TA's scope of work and cannot be considered in calculating loss of productivity, yet McCarthy failed to account for this impact to the rough carpentry in terms of hours, dollars or units of production during any impacted or unimpacted periods.

Weather is also a factor in establishing the measured mile because it has to be accounted for in both the impacted and unimpacted activities. While McCarthy identified 8 days of weather that impacted the critical path on the schedule, he did not take weather into account when analyzing the exterior framing and truss/sheathing work between the impacted and unimpacted work. Although in and of itself it is not fatal to the measured mile analysis, it is yet another condition to be considered in determining

¹⁰⁸McCarthy combined the exterior and interior framing into a single unit cost.

¹⁰⁹The budget/estimate is discussed below, but it was not the figure TA used when it bid the job.

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whether a reasonable "apples to apples" comparison is being made. Englehart is critical of McCarthy's failure to account for weather and suggests there were more than eight days of weather delay for which TA is responsible under its contract, but he failed to produce or refer to any evidence of such additional weather delays or their impact on the critical path of either the measured mile or the unimpacted work. McCarthy's estimate of eight days, on the other hand, is supported by the project records and therefore accepted by the court (TA-01201/4) in considering TA's claim for loss of productivity.

Upon careful consideration of the arguments of counsel and the evidence, including the reports and testimony of the expert witnesses McCarthy and Englehart, the court finds that TA has not proven its damages for loss of productivity to a reasonable degree of certainty utilizing the measured mile analysis prepared by McCarthy. The court agrees with Englehart that in the end, McCarthy's analysis is nothing more than a total cost calculation disguised as a measured mile analysis. However, because the court is satisfied to a reasonable degree of certainty based on all of the evidence that TA's work was substantially disrupted by OSFC and its agents, and that the disruption caused a loss of productivity to TA's rough carpentry labor, the court must award damages so long as they can be calculated with reasonable certainty.

While the court finds that it is highly impractical if not impossible for TA to prove its actual losses directly using specific segregated costs assigned to each activity upon which TA bases its claim, the modified total cost method is suited to the purpose. The modified total cost method provides the court with a way to calculate TA's loss of productivity with reasonable certainty because there is sufficient information in evidence to make the necessary adjustments needed for such a calculation. Here, the modified total cost method allows the court to make the necessary adjustments to TA's original estimate for rough carpentry labor and the conditions mentioned above.

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The elements of the total cost method are:

(1) that it was impossible or highly impracticable for them to prove their actual losses directly; (2) that their bid was reasonable; (3) that the actual costs they sought from PERS were reasonable; and (4) that PERS' breach(es) were the sole cause of CCI's damages.

Cleveland Constr., Inc. v. Ohio Pub. Emples. Ret. Sys., 2008-Ohio-1630, ¶¶ 39-40 (10th Dist.).

The modified total cost method is simply the total cost method, adjusted for any deficiencies in the plaintiff's proof in satisfying the requirements of the total cost method. The contractor must adequately separate the additional costs for which it is responsible. (citation omitted) If appropriate, the modified approach is used where the court finds it necessary to adjust either the contract price or the total cost of performance, or both. (citations omitted). Permitting the contractor to use the modified total cost method prevents the Government from obtaining a windfall simply because the plaintiff is unable to satisfy all the elements of the total cost method.

Neal & Co. v. United States, 36 Fed.Cl. 600, 638 (1996); *See also, Servidone Constr. Corp. v. United States*, 19 Cl. Ct. 346, 1990 U.S. Cl. Ct. LEXIS 22, 36 Cont. Cas. Fed. (CCH) P75,797 (Cl. Ct. 1990); affirmed, *Servidone Constr. Corp. v. United States*, 931 F.2d 860 (Fed.Cir.1991).

Utilizing the modified total cost method here, the court makes the following adjustments: a) to TA's bid estimate for rough carpentry to account for TA's failure to lock in its subcontractor quote for rough carpentry labor and for underestimating the cost when it set its budget; b) for impacts and disruption for which TA is solely responsible, including rework, supervision, crew size management, normal weather and other environmental issues not in the control of OSFC; c) for change orders included in its total cost for rough carpentry labor and for which the Contract Sum was

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already increased; and d) for discrete changes for which TA did not seek change orders during construction (TA-0734).¹¹⁰

a. Adjustment of TA's bid estimate for rough carpentry labor.¹¹¹

TA's bid estimate must be adjusted upward to approximate a reasonable amount for the estimate before it commenced construction. When TA submitted its bid for the Dorm Project it used its low quote from Holmes Lumber for rough carpentry labor in the amount of \$196,440.00 (TA-592-TRANS000001). This was an obviously low quote and Holmes refused to honor the quote after TA was declared the low bidder. The court finds that TA grossly underestimated its costs for rough carpentry labor when it submitted its bid. The next lowest quote for rough carpentry labor was substantially higher than Holmes' quote and it was from Pro Build in the amount of \$673,092.00 as indicated on the October 18, 2010 bid sheet (TA-592-000005). When TA was awarded the Contract and Holmes Lumber would not honor its quote, TA did not or could not find a subcontractor for the rough carpentry labor at an acceptable price and therefore decided to self-perform the work.

¹¹⁰While the court has found that OSFC waived the notice, certification and submission requirements in GC Article 8 so far as timeliness is concerned, OSFC still had a right to know about and understand the costs for additional costs for framing resulting from a change in the work. A change in the work is different from loss of productivity in that it is work that is not within the original scope of the Contract, whereas loss of productivity represents the cost of performing work within the scope of the contract, but under conditions caused by the owner that increases the contractor's costs for that work. GC 7.1.2 provides that if the contractor proceeds with any change in the work without appropriate authorization it waives an adjustment to the Contract Sum for that work. TA had no written authorization for the change in the work as captured in TA-0734.

It is universally recognized that where a building or construction contract, public or private, stipulates that additional, altered, or extra work must be ordered in writing, the stipulation is valid and binding upon the parties, and no recovery can be had for such work without a written directive therefor in compliance with the terms of the contract, unless waived by the owner or employer.

Foster Wheeler Enviresponse v. Franklin Cnty. Convention Facilities Auth., 78 Ohio St.3d 353, 360, 1997-Ohio-202, 678 N.E.2d 519.

¹¹¹Rough carpentry includes the four components identified by McCarthy in his analysis, i.e. exterior/bearing framing; interior framing; trusses/sheathing; and bulkhead framing.

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According to McCarthy and the contemporaneous project records TA's "buy-out" of its estimated rough carpentry labor amounted to \$20,047.70 for each ES/MS dorm and \$25,059.52 for each HS dorm for a total of \$321,644.00 (TA-1200/85).¹¹² These estimates result in an allocation of the total rough carpentry labor costs between the two building types of 55.6% for the HS dorms and 44.4% for the ES/MS dorms. Rather than buying out the rough carpentry labor, TA instead self-performed it by employing carpenters and utilizing temporary workers throughout construction. However, TA's estimate was an artificial number, and while it may have been based on estimates by TA in discussions with the Deering brothers, there are more reliable and objective data upon which the court can determine a reasonable estimate for the rough carpentry labor, i.e. Pro Build's quote of \$673,092. The average of the Pro-Build quote (\$673,092) and Holmes' quote (\$196,440) is \$434,766. The court finds that the average of the two quotes submitted by third parties at bid time in the amount of \$434,766 establishes a more objective and reasonable estimate for the cost of rough carpentry labor for the Dorm Project. Accordingly, the court adjusts TA's estimate for rough carpentry labor to \$434,766 for purposes of calculating its damages using the modified total cost method.

Applying the allocation percentages to each type of dorm as calculated above yields the following:

- Rough Carpentry Labor Estimate (\$434,766) x 55.6% = \$276,536.61 (6 - HS Dorms)
- Rough Carpentry Labor Estimate (\$434,766) x 44.4% = \$220,831.39 (6 - ES/MS Dorms)

Applying the allocated costs to the individual dorms yields the following:

- Cost per HS Dorm = \$276,536.61 ÷ 6, or \$46,089.43
- Cost per HS Dorm = \$220,831.39 ÷ 6, or \$36,805.23

¹¹²From a review of TA-0592/5, it appears that TA calculated its labor costs for rough carpentry on February 15, 2011 to arrive at an estimate for budgeting and schedule of values purposes as it did not actually buy out the rough carpentry labor through subcontracting.

Applying these individual estimated costs to the Dorm Project results in the following Gross Losses Per Dorm and Unadjusted Gross Loss:

HS Dorms	Total Actual Costs	Adjusted Estimate	Gross Losses Per Dorm
OSSB5 (First to Start)	\$199,526.54	\$40,288.32	\$159,238.22
OSSB6	\$160,667.18	\$40,288.32	\$120,378.86
OSD7	\$153,154.75	\$40,288.32	\$77,507.03
OSD6	\$129,721.78	\$40,288.32	\$112,866.43
OSD5 (Last to Finish)	\$125,811.64	\$40,288.32	\$89,433.46
OSSB7 (Last to Start)	\$117,795.35	\$40,288.32	\$85,523.32
ES/MS Dorms			
OSSB1 (First to Start)	\$119,945.95	\$32,172.68	\$87,773.27
OSSB2	\$111,068.67	\$32,172.68	\$78,895.99
OSD3	\$108,449.13	\$32,172.68	\$68,686.82
OSSB3 (Last to Start)	\$100,859.50	\$32,172.68	\$76,276.45
OSD2 (Next to Last Finish)	\$82,950.69	\$32,172.68	\$50,778.01
OSD1 (Last to Finish)	\$80,474.40	\$32,172.68	\$48,301.72
	\$1,490,425.58	\$434,766.00	
		Unadjusted Gross Loss	\$1,055,659.58

(Table 5)¹¹³

¹¹³This table helps to illustrate the significant impact that the problems with the drawings had on the Dorm Project. The earlier dorms were impacted the most, i.e. OSSB5 (HS) and OSSB1 (ES/MS) and incurred the greatest rough carpentry labor costs. Although not entirely linear, the numbers do support the loss of productivity claim. As the plans/drawings were developed and became more clear, the costs/losses declined.

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Subtracting the Adjusted Estimate from the Total Actual Costs for rough carpentry labor yields a difference of \$1,055,659.58, the Total Gross Loss to TA. From this amount further adjustments must be made.

b. Adjustment for impacts to productivity for which TA is solely responsible, including rework, supervision, crew size management, normal weather and other environmental issues not in the control of OSFC.

OSFC had no control over or responsibility for any self-inflicted rework performed by TA, or its supervision issues, crew composition, normal weather and other environmental impacts or disruption, all of which increased TA's rough carpentry labor costs and for which TA is solely responsible.¹¹⁴ After careful consideration of the evidence the court finds that these impacts to TA's rough carpentry labor productivity amounts to 10% of its Total Gross Loss, or the sum of \$105,565.96. Using the modified total cost method, this amount is deducted from the Total Gross Loss to account for these impacts to TA's rough carpentry labor, for which TA, and not OSFC, is responsible. *Bagwell Coatings, Inc. v. Middle S. Energy, Inc.*, 797 F.2d 1298 (5th Cir. 1986).

c. Adjustment for change orders included in its total cost for rough carpentry labor and for which the Contract Sum was already increased.

TA was also paid for change order work during construction. Change orders 1 through 26 reflect additional costs for carpentry in the total amount of \$44,725.32, which increased TA's Contract Sum.¹¹⁵ This amount must also be deducted from the

¹¹⁴This takes into account the issues raised by Englehart in his analysis of McCarthy's measured mile methodology and also McCarthy's opinion that TA incurred 14 days of delay that was self-inflicted and 8 weather related days all of which impacted TA's work and none of which was the responsibility of OSFC. The court is cognizant of the fact that all of these days did not necessarily impact only rough carpentry, but from a review of the evidence the rough carpentry was substantially impacted and this was taken into consideration.

¹¹⁵This sum was arrived at by totaling the amounts paid for carpenter costs indicated in change orders 1-26 (JX-F-01 through JX-F-26). Because this amount is included in the adjusted Contract Sum

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Unadjusted Gross Loss as it is considered within the scope of TA's Contract and settled by change orders, not attributed to loss of productivity.

d. Adjustment for discrete changes for which TA did not seek change orders during construction (TA-0734).

Wilhelm identified TA-0734 as discrete changes arising from additional framing work for which TA was entitled to an increase in the Contract Sum. These costs are captured in the JCR for rough carpentry labor according to Wilhelm. Wilhelm's estimated costs for additional framing work (TA-0734) is discussed above under "Unprocessed Change Orders and Scope Adjustments." Disregarding Wilhelm's inefficiency factor as not established by sufficient evidence, the total amount estimated for additional framing work was \$464,148.24 for all 12 dorms.¹¹⁶ After careful consideration of the JCR and contemporaneous project records and considering the testimony of Wilhelm, the court finds this amount to be a reasonably certain approximation rough carpentry labor not included in TA's original scope of work. While this amount was not allowed as part of TA's claim for additional work related to unprocessed scope adjustments, it must be considered in calculating loss of productivity because loss of productivity relates to work within TA's scope under the Contract, not to additional work which was not captured by a change order. Accordingly, the amount of \$464,148.24 must be deducted from TA's Unadjusted Gross Loss.

TA is entitled to overhead (10%) and profit (5%) on the Adjusted Gross Loss. Considering the adjustments set forth above, the amount of damages for loss of productivity to TA's rough carpentry labor is calculated as follows:

and therefore due under the unpaid balance of the contract, they must be deducted from the loss of productivity damage calculation just as the Adjusted Estimate for the original scope of work.

¹¹⁶The details of this calculation are included in the analysis of Unprocessed Change Order & Scope Adjustments above.

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MODIFIED TOTAL COST CALCULATION		
	Total Rough Carpentry Labor Costs (From THE JCR)	\$1,490,425.58
a)	Less Adjusted Bid Estimate	-\$434,766.00
	Unadjusted Gross Loss	\$1,055,659.58
b)	Less TA Impacts/Contractual Risk (10%)	-\$105,565.96
c)	Less Change Orders for Carpenter Labor	-\$44,725.32
d)	Less Labor Incurred for Discrete Change Orders Not Allowed But Included in Rough Carpentry Labor Costs	-\$464,148.24
	Adjusted Loss	\$441,240.06
	10% Overhead	\$44,124.01
	5% Profit	\$22,062.00
	Damages for Loss of Productivity	\$507,426.07

(Table 6)

For the same reasons set forth in the analysis of the extended general conditions an additional bond premium is not compensable. Accordingly, it is recommended that TA be awarded \$507,426.07 for loss of productivity related to its rough carpentry labor.

7. Additional Drywall Costs.

The court finds from a review of the contemporaneous project records, testimony and other evidence submitted at trial (including McCarthy's report on causes, TA-1200/57-77) that TA did incur substantial costs for additional drywall work to repair damage caused by other prime contractors. The court further finds that LL/OSFC were

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solely responsible to properly manage, oversee, coordinate and schedule the work of such other prime contractors and Campus-wide Bid Packages contractors, so as not to cause damage to TA's completed work. Moreover, while the court is cognizant of TA's duty to protect its work (JX-B/16. GC 2.4), the court finds that LL/OSFC prevented TA from protecting the work for which it seeks damages. Examples of such damage and notices to OSFC/LL include, but are not limited to the following: TA-0555/1, TA-0556 and TA-0557, March 1, 2012 notices from TA to LL regarding damage to existing finishes and lack of aluminum doors (not in TA's scope) with photos; TA-0563, March 8, 2012 certified claim; TA-0597, TA letter to LL giving status of punch list items; TA-0603/2-3, continuing damage by others.

Many times during the calculated period TA was prevented by LL from entering the dorms because of Campus-wide Bid Packages work that was being performed, particularly the casework, so not only could TA not protect its work, it could not readily document who did the damage. Smith testified that the openings built by TA for the casework were too small. In many instances, according to Smith, TA had to rework bulkheads and soffits, including removing drywall so that the casework could be installed. Smith blamed this on TA's work being out of plumb or out of square.¹¹⁷ When asked if there were any problems with the dimensional issues with the plans he said no, that the issue was that the walls were out of square and out of plumb and that the casework to be installed had a dimension that they held to, meaning that the casework must have been ordered from the dimensions in the drawings and not field measured as recommended by Wilhelm a year earlier (TA-0315/1).

Smith testified that installation of the casework was always to follow TA's work and that it was not included in the schedule for TA's scope of work at bid time. This was

¹¹⁷While the walls may have been out of plumb and out of square, on more than one occasion LL accused TA of this defect in its work and each time they checked the walls they were within the parameters allowed by the specifications. McCarthy addressed this issue in his initial report (TA-1200/71-77).

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confirmed by McCarthy in his initial report and the associated issues are captured in detail in his discussion of the impact of the Campus-wide Bid Packages on TA's work (TA-1200/59-65). The court is satisfied that TA was not responsible for the damage and rework and that OSFC is responsible for these damages due to poor coordination and oversight of the other contractors.¹¹⁸

McCarthy's evaluation and analysis of the additional drywall costs (TA-1201/8) are generally supported by the contemporaneous project records and testimony. However, in order to reach an approximation of TA's damages with reasonable certainty, McCarthy's calculation of damages is subject to three adjustments: a) calculation of the actual costs incurred; b) moneys loaned to Sammie Walker, TA's painting and drywall subcontractor; and c) original scope of work included in the unadjusted costs incurred. McCarthy estimated drywall costs attributed to repairs of excessive damage by others to TA's finished drywall work and an extended punchlist process by calculating the total drywall costs incurred during the Extended Period and then marked up those costs for overhead, profit and additional bond premium for an unadjusted gross amount of \$498,003.90. However, McCarthy did not allow for money loaned to Sammie Walker and original scope work in TA's contract that was performed during this period. Pre mark-up adjustments to this amount are summarized below.

a. Calculation of drywall costs incurred. The amount calculated by McCarthy for drywall costs that were incurred during the extended period is \$422,717.85. In addition to entitlement, Englehart disputes McCarthy's calculation of these costs and fixes the amount at \$411,167.41 based on the September 30, 2012 JCR. For purposes of calculating TA's damages, the court accepts Englehart's lesser amount of \$411,167.41 as the unadjusted gross amount of TA's additional drywall work. This

¹¹⁸Also, as noted in the analysis of the adjustment for the loan to Sammie Walker below, corrective work to drywall and painting is fully accounted for by deduction of the loan amount as liquidated by TA and Sammie Walker for supplementation and corrective work.

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amount must be adjusted downwards to account for a loan to Sammie Walker that was included in the additional costs and remaining scope of work in TA's contract.

b. Loan to Sammie Walker. On February 10, 2012, TA loaned Sammie Walker \$400,000 (Defendant Exhibit F). This loan was directly attributable to work Sammie Walker was performing on the Dorm Project and was included in the JCR for drywall and painting costs. According to the JCR, TA supplemented Sammie Walker's subcontract work substantially for both drywall and painting, either by payment to third party subcontractors or self-performance. From a review of the project records it also appears that Sammie Walker had substantial corrective work to perform. Supplementation and correction of defective work are both costs for which TA and Sammie Walker are responsible, not OSFC.

The court infers from the fact of the loan, the testimony at trial and the project records that TA and Sammie Walker liquidated the amount of this supplementation and corrective work in the amount of \$400,000 and reduced it to a cognovit note from Sammie Walker to TA.¹¹⁹ Under the terms of the \$400,000 cognovit note, Sammie Walker is obligated to repay the loan on a schedule to be determined by the parties upon completion of the Dorm Project. There was no testimony at trial as to whether or what terms were reached, but there was testimony that Sammie Walker had repaid a "few thousand dollars." The note amount is not recoverable from OSFC because it was an independent obligation of Sammie Walker to TA.

Although it has not been repaid, the \$400,000 loan cannot be considered as additional costs incurred for drywall and painting for which OSFC is responsible. Koniewich testified that the \$400,000 was included in the JCR. This means that McCarthy's calculation of costs for drywall and painting necessarily include the \$400,000 loaned to Sammie Walker. The fact is that TA had to pay someone to

¹¹⁹Because the court is deducting the full amount of the loan from TA's claim for additional drywall and painting costs, all costs for punchlist work which was the responsibility of TA, and supplementation of Sammie Walker's work is fully accounted for without further consideration or adjustment.

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complete the drywall and painting work and who better to do the work or pay for it than Sammie Walker who was familiar with the Dorm Project and was already obligated to do the work. The loan was simply a means to finance Sammie Walker's efforts to correct the work and pay for the supplementation. For calculation purposes only, one-half of the loan is attributed to drywall subcontract work in the amount of \$200,000 and shall be deducted from the unadjusted gross costs incurred for additional drywall activities.¹²⁰

c. Original scope of work included in additional costs incurred. Additional costs for drywall cannot include remaining original scope of work performed during the calculated period, because TA (Sammie Walker) was already obligated to perform this work. The remaining original scope of work amounted to \$90,068.44 as taken from the "balance to finish" figures set forth in the schedule of values applicable to drywall labor and materials for Pay Application No. 12, which included work through February 10, 2012 (JX-G-12). This provides a reasonable basis for determining the value of the remaining original scope of work for drywall. TA is entitled to overhead (10%) and profit (5%) on the Adjusted Additional Costs for Drywall.

¹²⁰The court did not attempt to allocate the \$400,000 loan among drywall and painting on a pro rata basis through a precise analysis of the JCR because the outcome is the same; \$400,000 must be deducted from the costs for additional drywall/painting calculated by Englehart/McCarthy regardless of the pro rata share for each activity. \$200,000 shall be deducted in like manner in calculating damages for additional painting costs.

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The total additional drywall costs are as follows:

ADDITIONAL DRYWALL COSTS		
a)	Additional Drywall Costs Incurred	\$411,167.41
b)	Less Sammie Walker Loan	-\$200,000.00
c)	Less Remaining Original Scope of Work	-\$90,068.44
	Adjusted Additional Costs for Drywall	\$121,098.97
	10% Overhead	\$12,109.90
	5% Profit	\$6,054.95
	Damages for Additional Drywall Costs	\$139,263.82

(Table 7)

For the same reasons set forth in the analysis of the extended general conditions an additional bond premium is not compensable. Accordingly, it is recommended that TA be awarded \$139,263.82 as damages for additional drywall costs.

8. Additional Painting Costs.

The court finds that TA is entitled to damages for additional painting costs for the same reasons as it was entitled to recover damages for additional drywall costs. However, as with the additional drywall costs, in order to reach an approximation of TA's damages with reasonable certainty, McCarthy's calculation of damages must be adjusted in accordance with the three exceptions previously noted for the drywall calculation.

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McCarthy estimated painting costs attributed to repairs of excessive damage by others to TA's finished painting work and an extended punchlist process by calculating the total drywall costs incurred during the Extended Period and marking up those costs for overhead, profit and additional bond premium for an unadjusted gross amount of \$486,742.67. As with the drywall analysis above, pre mark-up adjustments to this amount are summarized below.

- a. **Calculation of painting costs incurred.** McCarthy estimated painting costs attributed to repairs due to excessive damage of finished work by others and an extended punchlist process by calculating the total drywall costs incurred during the Extended Period in the amount of \$413,159.04. Englehart did not dispute this amount (but he did dispute entitlement) and in fact he calculated an amount that was approximately \$3,000.00 higher than McCarthy's. For purposes of calculating TA's damages, the court accepts McCarthy's lesser amount of \$413,159.04 as the unadjusted gross amount of TA's additional painting work.
- b. **Loan to Sammie Walker.** On February 10, 2012, TA loaned Sammie Walker \$400,000 (Defendant Exhibit F). The court adopts the same analysis as set forth above under Additional Drywall Costs for the Sammie Walker loan and for calculation purposes only, one-half of the loan is attributed to supplementation and corrective work for which OSFC is not responsible in the amount of \$200,000 and shall be deducted from the unadjusted additional costs for painting.
- c. **Original scope of work included in unadjusted costs incurred.** Additional costs for painting cannot include remaining original scope work performed during the calculated period, because TA (Sammie Walker) was already obligated to perform this work. The remaining original scope work amounted to \$79,576.50 as taken from the "balance to finish" figures set forth in the

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schedule of values applicable to painting labor and materials for Pay Application No. 12, which included work through February 12, 2012 (JX-G-12). This provides a reasonable basis for determining the value of the remaining original scope of work for painting.

TA is entitled to overhead (10%) and profit (5%) on the Adjusted Additional Costs for painting.

ADDITIONAL PAINTING COSTS		
a)	Additional Painting Costs Incurred	\$413,159.04
b)	Less Sammie Walker Loan	-\$200,000.00
c)	Less Remaining Original Scope of Work	-\$79,576.50
	Adjusted Additional Costs for Painting	\$133,582.54
	10% Overhead	\$13,358.25
	5% Profit	\$6,679.13
	Damages for Additional Painting Costs	\$153,619.92

(Table 8)

For the same reasons set forth in the analysis of the extended general conditions an additional bond premium is not compensable. Accordingly, it is recommended that TA be awarded \$153,619.92 as damages for additional painting costs.

9. Extended Home Office Overhead.

McCarthy provided analysis and opinions regarding extended home office overhead costs. He relied on an ODOT (Ohio Department of Transportation) method for calculating home office overhead payment (HOOP) in the event of an owner caused

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delay.¹²¹ No evidence of ODOT's method was introduced at trial beyond the simple calculation. However, as applied by McCarthy the HOOP formula functions as a liquidated damages provision in that the parties agree to the conditions for recovery of such damages and the rate of such recovery at the time of contracting. Here, unlike contractors who contract with ODOT, TA and OSFC did not agree to such a formula or process to determine damages for home office overhead.

Here, included in the court's award of damages for delay, additional work to correct damage caused by others and loss of productivity, TA is awarded overhead at the rate of 10% of its costs. TA offered no evidence to show that the 10% overhead included in its claim for delay and disruption damages would not cover its home office overhead. Furthermore, in the Contract TA agreed that home office overhead would be included within the 10% overhead allowance for changes to the work (JX-B/57, GC 7.6.5.6.1).

Such costs have been allowed as a measure of damages for breach of contract when an owner suspends work for an undetermined period of time and directs the contractor to remain on standby to return on demand by the owner. The theory is that during the suspended period the contractor is deprived of its anticipated stream of income to contribute to the home office overhead. Or, said another way, the home office overhead is no longer absorbed in the previously anticipated progress payments from the suspended work.¹²² *Complete Gen. Constr. Co. v. Ohio DOT*, 94 Ohio St.3d 54, 58, 2002-Ohio-59, 760 N.E.2d 364. But such costs were not sought here on this basis. The court recognizes that the 10th District Court of Appeals recognized recently that a court has, "discretion in calculating damages for home office overhead." *J&H*

¹²¹HOOP is an alternative to calculating damages according to the Eichleay formula (discussed below) or other methods which may be used by a court, and like a liquidated damages provision, it provides certainty and simplicity in calculating the loss.

¹²²Here, however, TA is compensated for the delay and the compensation includes overhead allowed by the contract for such claims.

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Reinforcing & Structural Erectors, Inc. v. Ohio Sch. Facilities Comm'n, 2013-Ohio-3827, ¶108 (10th Dist.). However, because the parties agreed to include home office overhead in the markup for overhead on direct costs, extended home office overhead should not be allowed. Otherwise, even if home office overhead were otherwise justified, the court would be rewriting the parties' contract to provide a more equitable result. *Foster Wheeler Enviresponse v. Franklin Cnty. Convention Facilities Auth.*, 78 Ohio St.3d 353, 362, 1997-Ohio-202, 678 N.E.2d 519. A court is not permitted to do so.

Accordingly, it is recommended that TA not be awarded damages for extended home office overhead.

10. Liquidated Damages

OSFC is withholding \$686,000 in liquidated damages from earned progress payments under the Contract (TA-0732). TA contends that the liquidated damages were wrongfully withheld. The issue before the court, then, is whether OSFC was within its rights to withhold liquidated damages for failure to meet the "Roof and Window Enclosure Complete" milestone starting with OSSB5, as that is the stated basis upon which it assessed such liquidated damages.¹²³ TA bears the burden of proof on this issue as it has alleged that OSFC breached the contract by wrongfully withholding liquidated damages and OSFC denies such allegation.

OSFC is correct that R.C. 153.19 required it to provide for liquidated damages in its contract with TA. Specifically, R.C. 153.19 provides that:

All contracts under sections 153.01 to 153.60, inclusive, of the Revised Code, shall contain provision in regard to the time when the whole or any specified portion of work contemplated therein shall be completed and that for each day it shall be delayed beyond the time so named the contractor shall forfeit to the state a sum to be fixed in the contract, which shall be deducted from any payment due or to become due to the contractor.

¹²³Keith testified that this was the specific reason for withholding liquidated damages. This is confirmed by Keith's letter of December 6, 2011 to TA (TA-0520/3).

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a. The Liquidated Damages Provisions of the Contract.

In furtherance of the mandate of R.C. 153.19, OSFC included Article 3 in its Contract Form (JX-A/1-2). Article 3 gave OSFC the right to "retain or recover" liquidated damages from the Contractor in the event the Work was not completed within the time specified, or a portion of the Work was not completed by any given Milestone date. Specifically, Article 3, Paragraph 3.3 provided:

The Contractor's failure to complete all Work within the period of time specified, or failure to have the applicable portion of the Work completed upon any **Milestone** date, shall entitle the Commission to retain or recover from the Contractor, as Liquidated Damages, and not as a penalty, the applicable amount set forth in the following table for each and every day thereafter until the Contract Completion or date of completion of the applicable portion of the Work, unless the Contractor timely requests, and the Commission grants an extension of time in accordance with the Contract Documents. (emphasis added).

The Contract also provided the following at Paragraph 3.4:

The amount of Liquidated Damages is agreed upon by and between the Contractor and the Commission because of the impracticality and extreme difficulty of ascertaining the actual amount of damage the State would sustain.¹²⁴

In addition, OSFC provided for recovery of liquidated damages in Article 8 of the General Conditions, GC 8.7 (JX-B/64).¹²⁵ GC 8.7.1 provides:

¹²⁴Courts give little weight to this recital by the parties when determining the difficulty of measuring a breach.

¹²⁵There really does not appear to be any good reason why OSFC would have included such a clause in Article 8 as Article 8 deals with dispute resolution and claims by the contractor for additional money or time. Moreover, such provision confuses the basis upon which to impose liquidated damages for failure to complete a milestone as it refers to Completion Milestones, which are not defined in the Contract Documents.

8.7.1 - If the Contractor fails to achieve one or more of the **Completion Milestones** set forth in the Contract Documents, the Contractor shall pay to or credit the Commission the associated liquidated damages per-diem sum(s) set forth in the contract Documents for each day that the Contractor fails to achieve one or more of the Completion Milestones.

8.7.1.1 - If the Contractor fails to achieve two or more Completion Milestones, **the Commission shall be entitled to recover the sum of the associated per diem rates.** (emphasis added).

Both the Contract Form (JX-A/2, Paragraph 3.5) and the General Conditions (JX-B/64, Paragraph 8.7.2) provide that in addition to liquidated damages OSFC may also recover actual damages from TA.

Specifically, the Contract Form provides:

3.5 - The Commission's right to recover Liquidated Damages does not preclude any right of recovery for actual damages.

and, the General Conditions provide:

8.7.2 - Nothing contained in this GC paragraph 8.7 shall preclude the Commission's recovery from the Contractor of actual damages.

In other words, the Contract entitled OSFC to recover both liquidated damages and actual damages. And, in fact, OSFC did just that when it withheld liquidated damages (TA-0526) and actual damages for delay OSFC paid to other prime contractors (TA-0644 and TA-0645) who OSFC accused TA of delaying. The per diem for liquidated damages triggered by a failure to meet a "Milestone" date or complete "all

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Work" was \$2,000 per day (GC Paragraph 3.3).¹²⁶ The Contract Documents (JX-C/11) define a "Day" as a calendar day unless otherwise specified.¹²⁷

b. The Assessment of Liquidated Damages.

On December 6, 2010, LL notified TA that it was assessing liquidated damages against TA's progress payment for December 2011 in the amount of \$206,000 (TA-0520). Subsequently OSFC withheld that amount from amounts due TA for its December 2011 progress payment and in addition withheld another \$90,000 for a total of \$296,000 (JX-G-10 and TA-0526). OSFC continued to withhold \$90,000 per month (\$3,000/day) from progress payments due TA for the following seven months for a total assessment of \$926,000 (TA-0732). In its March 8, 2012 certified claim TA requested that OSFC release the contract payments and liquidated damages withheld (TA-0563/2). In May 2013, OSFC released \$240,000 to TA, but continues to withhold \$686,000 (TA-0732 and TA-0673).

c. "Roof and Window Enclosure Complete" was not an assessable milestone;

OSFC and TA interpret the word "milestone" differently when used to assess liquidated damages under the Contract for failing to meet a milestone. The ambiguity is revealed when the Contract Documents are reviewed to determine the applicable milestones.

OSFC contends that the applicable milestones are as set forth in the Bid Schedule (JX-D/77-78) and that such milestones include a milestone for each dorm entitled "Roof and Window Enclosure Complete." On the other hand, TA contends that

¹²⁶The per diem was based on the dollar amount of the contract. Here, a per diem of \$2,000 was presumably applicable because the dollar amount of the Contract was more than \$2,000,000 but not more than \$5,000,000.

¹²⁷Specific terms are defined in Vol. 1 of the Project Manual and are capitalized throughout the Contract Documents thereby indicating their defined meaning where used. Article 3 does not refer to the specific word "Day" but instead uses the term "day" which is not capitalized. However, for purposes of this report, the Referee adopts the specific definition of Day.

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the applicable milestones are as set forth in the "Schedule of Milestones" contained in the specifications (JX-D/75-76) and that such schedule does not include a "Roof and Window Enclosure Complete" milestone. Whether and when OSFC's right to assess liquidated damages accrues depends on the meaning of the word "milestone." If TA's contention is correct, then OSFC wrongfully assessed liquidated damages on that basis alone.

[T]he meaning of any particular construction contract is to be determined on a case-by-case and contract-by-contract basis, pursuant to the usual rules for interpreting written instruments. See *Cameron*, supra, 33 Ohio St. at 374. The cardinal purpose for judicial examination of any written instrument is to ascertain and give effect to the intent of the parties. (citation omitted) "The intent of the parties to a contract is presumed to reside in the language they chose to employ in the agreement." (citation omitted)

"Common words appearing in a written instrument will be given their ordinary meaning unless manifest absurdity results, or unless some other meaning is clearly evidenced from the face or overall contents of the instrument." (citation omitted) Technical terms will be given their technical meaning, unless a different intention is clearly expressed.

Foster Wheeler Enviresponse v. Franklin Cnty. Convention Facilities Auth., 78 Ohio St.3d 353, 361, 1997-Ohio-202, 678 N.E.2d 519.

Here, in the Project Manual Vol. 1 of 6 (JX-C/12), the term "Milestone" is capitalized and defined as follows:

Milestone - A date or event in the development of the Work identified in the Contract Documents and illustrated on the Construction Schedule.

While this definition seems helpful and in support of OSFC's interpretation of the Contract, the problem lies with the definition of Construction Schedule. There was no Construction Schedule as that term is defined when the Dorm Project was bid or when

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the parties executed the Contract. The Contract Documents (JX-C/10) define the "Construction Schedule" as:

The critical path schedule for performance of the Contract, showing the time for completing the Work within the Contract Time, the planned sequence for performing the Work, the Contractor's resource loading curve and cost loading information, and the interrelationship between the activities of the Contractors, the Architect, the Construction manager, and the Commission, as periodically updated during the performance of the Work.

From the evidence presented a "Construction Schedule," as defined, did not exist at the time the Contract was executed, nor was such a schedule ever developed by LL who was responsible for developing and maintaining the Construction Schedule (JX-B/35, GC 4.3). TA was neither asked for nor furnished any resource loading information and the relationship between all of the activities on the Dorm Project, including the casework, and Campus-wide Bid Packages activities were not included in any schedule before or after the Contract was executed. As such, the Contract's definition of "Milestone" making reference to the "Construction Schedule" offers no help to define "Milestone."

On the other hand, following TA's interpretation, the Schedule of Milestones set forth individual milestone dates for completion of each dorm as well as a date for completion of the entire Dorm Project (JX-D/75-76). The liquidated damages provision in GC 8.7.1 provides for assessment for failure to meet a "completion milestone." Each of the milestones in the Schedule of Milestones is a completion milestone. Not all of the milestones in the Bid Schedule are completion milestones. In the Bid Schedule there are also milestones for Close-in Inspections for each dorm. These are not completion milestones, but are instead activity milestones. This fact favors TA's interpretation, but is not conclusive.

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The court finds that the term "milestone" is capable of two interpretations, both of which are reasonable. As such, the term "milestone" is ambiguous. Because the term milestone is ambiguous, the court must interpret its meaning. An ambiguity in a written contract should first be resolved, if possible, by parol evidence if it is available.¹²⁸ Otherwise, the ambiguity will be resolved through the usual rules for interpreting the written terms of a contract, the primary rule being ambiguities are resolved against the drafter of the contract, here OSFC.

When contract language is ambiguous, a court must first examine parol evidence to determine the parties' intent. *Cline v. Rose* (1994), 96 Ohio App.3d 611, 615, 645 N.E.2d 806. However, when parol evidence cannot elucidate the parties' intent, a court must apply the secondary rule of contract construction whereby the ambiguous language is strictly construed against the drafter. *Reida v. Thermal Seal, Inc.*, Franklin App. No. 02AP-308, 2002 Ohio 6968, ¶29.

Cent. Funding, Inc. v. Compuserve Interactive Servs., Inc., 2003-Ohio-5037, ¶44 (10th Dist.).

Here, the intent of the parties can be established through parol evidence. At the pre-bid presentation (TA-0132/21) held on October 19, 2010, LL presented two graphics depicting the milestones for the Dorm Project. The construction milestones all consisted of completion milestones for each dorm and for the Dorm Project overall. There was no mention of interim activity milestones such as the Roof and Window Enclosure Complete. The court finds that the assessable milestones are those milestones for completion of the individual dorms and the overall Dorm Project as set forth in the Schedule of Milestones. Interim construction activity milestones are not assessable as contended by OSFC. Of course, without this evidence the term milestone would be construed against OSFC and in favor of TA because OSFC created the ambiguity in the Contract Documents. The outcome would be the same.

¹²⁸The court is cognizant of the integration clause in the Contract (JX-A/2, ¶ 4.1).

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d. Law Applicable to Liquidated Damages Provisions:

The law applicable to the purpose and validity of liquidated damages provisions in contracts is as follows:

[C]auses in contracts providing for **reasonable** liquidated damages are recognized in Ohio as valid and enforceable. (emphasis added)

Samson Sales, Inc. v. Honeywell, Inc., 12 Ohio St.3d 27, 28, 465 N.E.2d 392 (1984).

However, reasonable compensation for actual damages is the legitimate objective of such liquidated damage provisions and where the amount specified is manifestly inequitable and unrealistic, courts will ordinarily regard it as a penalty. *Id.*

The law applicable to determining whether a clause in a contract is intended as a penalty or as liquidated damages is as follows:

To determine whether a sum named in a contract is intended as a penalty or as liquidated damages, it is necessary to look to the whole instrument, its subject-matter, the ease or difficulty of measuring the breach in damages, and the amount of the stipulated sum, not only as compared with the value of the subject of the contract, but in proportion to the probable consequences of the breach, and also to the intent of the parties ascertained from the instrument itself in the light of the particular facts surrounding the making and execution of the contract.

Jones v. Stevens, 112 Ohio St. 43, Syllabus 1, 146 N.E. 894 (1925).

e. The liquidated damages provisions are a penalty.

Liquidated damages provisions are like any other contract provisions, the parties are free to contract with one another on any terms they wish, so long as they are not illegal (*malum in se*) or do not violate public policy (*malum prohibitum*). Addressing the parties' freedom of contract in the context of liquidated damages, the Supreme Court of Ohio observed:

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In certain circumstances, however, complete freedom of contract is not permitted for public policy reasons. One such circumstance is when stipulated damages constitute a penalty.

Lake Ridge Acad. v. Carney, 66 Ohio St.3d 376, 381, 613 N.E.2d 183 (1993).

Where liquidated damages provisions constitute a penalty they are not enforceable.

Punishment of a promisor for having broken his promise has no justification on either economic or other grounds and a term providing such a penalty is unenforceable on grounds of public policy.

Id.

Here, the liquidated damages provisions must provide for a stipulated sum that is reasonably proportional to the probable consequences of the breach or such provision will be deemed a penalty and therefore unenforceable. The determination of whether the provisions are for liquidated damages or constitute a penalty must be performed prospectively as of the time the contract was executed and not with respect to when and how OSFC actually sought to enforce the provisions.

Thus, when a stipulated damages provision is challenged, the court must step back and examine it in light of what the parties knew at the time the contract was formed and in light of an estimate of the actual damages caused by the breach. If the provision was reasonable at the time of formation and it bears a reasonable (not necessarily exact) relation to actual damages, the provision will be enforced.

Lake Ridge Acad. v. Carney, 66 Ohio St.3d 376, 382, 613 N.E.2d 183 (1993).

[A] court will construe the contract by its four corners in the light of the situation of the parties at the time of execution of the contract," and that the issue of whether the stipulated damages properly constitute liquidated damages will be determined by the court "from that position.

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Domestic Linen Supply and Laundry Co., Inc. v. Caplin, 1979 Ohio App. LEXIS 12501, *4, 1979 WL 209379 (Ohio Ct. App., Franklin County Oct. 16, 1979).

As of December 20, 2010, the date OSFC and TA executed the Contract, it was uncertain when OSFC would be able to occupy the dorms. However, it was certain that neither OSD or OSSB would occupy the dorms upon completion of TA's work, assuming it was completed by the completion date on the Bid Schedule. Smith confirmed this in his testimony and there are numerous project records confirming this fact. Until the Campus-wide Bid Packages were complete, and particularly the fire alarm system, OSD and OSSB could not occupy the dorms (TA-0260/5 and TA-0260/11). Moreover, OSFC did not have an approved set of plans for the dorms, the alarm system or the academic buildings at the time the Contract was executed and it had no reasonable basis to know when such approval would occur.¹²⁹ OSFC was uncertain when the Campus-wide Bid Packages would be ready for bidding and construction, although as of November 18, 2010, SHP and LL were discussing anticipated completion of the academic buildings and Campus-wide Bid Packages anywhere from July to September 2012 (TA-0162). At the time OSFC and TA executed the Contract that would mean that the dorms would not be occupied for at least six to eight months after TA's work was complete according to the Bid Schedule. Based on what was known to OSFC and TA as of the time they executed the Contract, OSFC would incur little or no damages due to loss of occupancy in January 2012.

The only other real consequences of TA not completing the dorms on time would be potential claims by other prime contractors for delay. However, such claims would not be difficult to measure and because the other prime contractor's contracts were much smaller than TA's in dollar amount, the probable consequences of such claims

¹²⁹If OSFC learned anything from the history of this Project, it was that it should expect further delays in design of the Campus-wide Bid Packages and the Academic buildings, because that was one thing that was constant on the Project; delay in design since its inception.

was not significant, at least not when compared to the amount of liquidated damages that could be imposed under the terms of the Contract. OSFC did not present any evidence to support a determination that the amount of the liquidated damages, not only as compared with the value of the subject of the contract, but also in proportion to the probable consequences of the breach, was reasonable. The evidence is to the contrary.

OSFC contends that the assessable milestones are those milestones described in the Bid Schedule of Project Manual Vol. 2 (JX-D/77-78 and 87-88).¹³⁰ Applying OSFC's interpretation of the applicable milestones, the first assessable milestone is commencement of OSSB1. At first glance, it might appear that a 45-day delay in commencing construction on the Dorm Project would lead to assessment of liquidated damages in the amount of \$90,000. On a \$4 million dollar contract that amount does not appear manifestly inequitable or unrealistic. However, a closer examination of how the liquidated damages operate in this contract reveals the penal nature of the provisions. Because of the cumulative nature of GC 8.7.1.1, and because of the staggered milestone structure of the Bid Schedule as the basis for establishing assessable milestones according to OSFC, the potential assessment of liquidated damages is much more than \$90,000.

The first page (JX-D/77) of the Bid Schedule shows a list of chronologically ascending milestones applicable to TA's Work at OSSB with the first milestone (OSSB-Commence Dorm 1) starting on March 22, 2011 and the last completion date (OSSB-Dorm 7 Complete) of January 10, 2012 (Joint Exhibit JX-D/77). The Bid Schedule also shows a list of chronologically ascending milestones applicable to TA's Work at OSD with the first milestone (OSD-Commence Dorm 1) starting on April 5, 2011 and the last completion date (OSD-Dorm 7 Complete) of January 18, 2012 (Joint Exhibit JX-

¹³⁰The court has determined otherwise, but for purposes of analyzing the liquidated damages provision, OSFC's interpretation is considered.

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D/78).¹³¹ These are the milestones that OSFC contends are applicable to assessment of liquidated damages.¹³²

If the Bid Schedule sets the milestones for liquidated damages as OSFC contends, then each dormitory had precisely three milestones and one date for completion as follows: 1) Commencement; 2) Roof/Window Enclosure Completion; 3) Close-in Inspection; and 4) Dorm Completion, for a total of thirty-six (36) discrete milestones and twelve (12) individual completion dates, each of which could independently trigger an assessment of liquidated damages at \$2,000 per day because of the cumulative language in GC 8.7.1.1. In other words, liquidated damages could potentially be assessed on all 12 dorms at 4 separate times, or at forty-eight (48) separate dates throughout construction and, depending on the length of the delay, such assessments could overlap and accumulate because GC 8.7.1.1 allows for cumulative assessment of liquidated damages.

Considering these circumstances a couple of examples illustrate the disproportionate nature of the liquidated damages provisions at the time the contract was executed, disproportionate not only to the size of the Contract,¹³³ but to the probable consequences of a breach by TA:

¹³¹The sequence for construction of the buildings was changed before construction began by Change Order No. 1, but the durations and order of performance remained the same (Joint Exhibit JX-F-01/3-5). The Bid Schedule provided for the following sequence: OSSB1, OSD1, OSSB2, OSD2, OSSB3, OSD3, OSSB5, OSD5, OSSB6, OSD6, OSSB7 and OSD7 (Alternate Dorms 4 and 8 were not built on either campus even though they remained in the schedules throughout construction). Change Order No. 1 changed the sequence for construction of the buildings to: OSSB5, OSD5, OSSB1, OSD1, OSSB6, OSD6, OSSB2, OSD2, OSSB7, OSD7, OSSB3 and OSD3.

¹³²The milestones actually relied upon by OSFC were as set forth in Recovery Schedule 3, but because it was not in existence at the time the Contract was executed, only the Bid Schedule can be considered in this analysis.

¹³³The disproportionate relationship of the per diem is pronounced because liquidated damages were actually being assessed against 12 sub-projects, not one project. In other words, TA failed to complete its work on schedule it was exposed to liquidated damages of \$2,000/day on all 12 dorms separately, including any applicable milestones, or \$2,000/day on a dorm that cost about \$331,000 to build on average. Looking at the per diem schedule of the Contract (JX-A/2) a contract for \$331,000

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a. **Example 1 - A 45-day delay commencing work on OSSB1 (OSFC's interpretation of the applicable milestones).** If TA delayed commencing construction on OSSB1 for just 45 days, following the Bid Schedule TA could have been assessed liquidated damages from March 22, 2011 to May 6, 2011 at the rate of \$2,000 per day for a total of \$90,000 for failing to commence construction on OSSB Dorm 1 (Joint Exhibit JX-D/77). However, because GC 8.7.1.1 allows for assessment of liquidated damages on a cumulative basis, and because of the structure of the Bid Schedule (which was the only schedule in existence when the parties entered into the Contract) having short intervals between the various milestones and completion dates, the potential liquidated damages resulting from an initial 45-day delay explodes exponentially.

Assuming the sequence of construction remained unchanged, any delay in commencement of the first building would necessarily have had a domino effect on meeting the milestones and completion dates for all 12 dorms. Following this domino effect through the Bid Schedule to completion of the Dorm Project the disproportionate and unreasonable amount of liquidated damages becomes readily apparent. Because of the cumulative language of GC 8.7.1.1, OSFC could have assessed each dorm as a separate project with the failure to meet any milestone or completion date for that dorm being assessable at \$2,000 per day.

A 45-day delay at the beginning of construction would necessarily trigger assessment of liquidated damages for each dorm for each of the 3 milestones and for the completion date of 45 days each. Or, looking at it another way, a total of 180 days per dorm for total liquidated damages of \$360,000 for just

would be assessed liquidated damages at a per diem of \$500/day, or 75% less than TA. This is all caused by GC 8.7.1.1, which OSFC elected to include in the Contract.

one dorm. But, because there were 12 dorms, the potential liquidated damages for a 45 day delay would have been \$4,320,000 (\$360,000 per dorm x 12) at the end of the Dorm Project, or 108% of the Contract Sum. Under this example, on March 3, 2012 OSFC would have completed all 12 dorms at no cost to OSFC and would have owed OSFC \$345,000.¹³⁴

b. Example 2 - A 45 day delay completing the dorms (TA's interpretation of the applicable milestones). TA contends that the only milestones applicable to its work were the completion milestones set forth in the "Schedule of Milestones" presented at the pre-bid meeting (TA-0132/21) and in the Project Manual, Vol. 2 (JX-D/75-76) and the court agrees. Using the milestones in the "Schedule of Milestones," this example assumes that TA does not delay its performance until completion of OSSB1, which is completed 45 days late. Here again, at first glance, it may seem that a 45 day delay would result in \$90,000 of liquidated damages. Again, this amount does not appear to be manifestly inequitable or unrealistic. However, because of the staggered milestone completion dates for the dorms coupled with the cumulative provisions of GC 8.7.1.1, the liquidated damages are dramatically higher. Referring now to the Schedule of Milestones (JX-D/75-76), OSSB1 was to be completed on October 21, 2011. Assuming the structure of the schedule is maintained, a 45 day delay in completing OSSB1 would necessarily push completion of all other dorms by 45 days, resulting in liquidated damages of \$1,260,000 for a 45-day delay at the end of the Dorm Project, or 31.7% of the Contract Sum.¹³⁵ Without the cumulative effect of

¹³⁴The Bid Schedule shows completion of all dorms by January 19, 2012. Adding 45 days of delay pushes the completion date to March 3, 2012.

¹³⁵Here again, 12 dorms x 45 days = 540 days of liquidated damages at \$2,000/day, or \$1,080,000, plus the Schedule of Milestones also includes an overall completion milestone for OSD and

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GC 8.7.1.1, a 45 day delay in completing the dorms starting with OSSB1 on October 21, 2011 would have resulted in 133 days of liquidated damages, or the sum of \$266,000; certainly a large sum of money, but again probably not manifestly inequitable or unrealistic depending on other facts and circumstances surrounding the making of the Contract.

Because of the way the bid schedule was set up¹³⁶ and because of the cumulative effect of the liquidated damages (GC 8.7.1.1) it must be said that, at the time the Contract was executed, the liquidated damages provisions were manifestly unreasonable, disproportionate in amount and had no relationship to the probable consequences of a breach. The liquidated damages provided for in the Contract were not an approximation of actual damages, but were intended instead as a tool to coerce performance and are therefore a penalty.

f. Roof and Window Enclosure Complete milestone was achieved.

Even if the liquidated damages provisions were enforceable, and the court were to adopt OSFC's interpretation of the applicable milestones, TA nonetheless achieved the milestones for which OSFC assessed liquidated damages. OSFC assessed liquidated damages because it claimed TA failed to meet the Roof and Window Enclosure Complete milestone starting with OSSB5 on July 14, 2011.¹³⁷ LL/Keith testified at trial that the roofs were complete in terms of installation.¹³⁸ However, he

OSSB separately for 2 additional milestones, or an additional 90 days. The total assessable days equal 630. The total liquidated damages for 630 days of completion milestone delay equals \$1,260,000.

¹³⁶McCarthy testified that the schedule was so tight that it would have had to have been executed with military precision in order to complete the project as planned.

¹³⁷LL/Keith relied on Recovery Schedule 3 to fix the milestone date for OSSB5 Roof and Window Enclosure Complete, yet Recovery Schedule 3 was never made part of the Contract by change order and therefore was not binding on TA. Moreover, almost three months earlier on September 15, 2011, at a Core & Executive Core Team meeting (at which Keith was present) it was reported that OSSB5 had achieved "Permanent Enclosure Complete" (JX-H-39/3).

¹³⁸Some roofs needed corrective work, but they were fully installed.

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contended they weren't complete because TA's roofing subcontractor was not certified to issue a warranty on one part of the roof (there were three types of roofs on the dorms). This was not a basis for assessing liquidated damages on December 6, 2011 because the Contract did not require TA to furnish any roof warranties until the date of substantial completion during close-out, which did not occur until months later. The close-out specifications provide as follows with respect to warranties:

1.8 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within 10 business days of completion of designated portions of the Work that are completed and occupied or used the Owner during construction period by separate agreement with Contractor.

None of the three types of roofs required that their warranties commence other than on the date of substantial completion. No part of the dorms were designated for occupancy or use by OSFC during the construction period by separate agreement with TA. To the contrary, DIC specifically notified SHP that certificates of occupancy for the dorms would not be issued until after the fire alarm system was installed (TA-0440/3, ¶ 5). The plans for the fire alarm system were not approved by DIC until July 2012, eight months after OSFC began assessing liquidated damages.

The court finds that TA did not have any obligation to furnish warranties for any of the roofs until the date of substantial completion, which, according to OSFC, was on June 1, 2012. TA did not fail to achieve the milestones upon which OSFC assessed liquidated damages.

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g. Delay of completion caused by OSFC bars assessment of liquidated damages.

TA contends that the milestones for assessment of liquidated damages were only those milestones set forth on the "Schedule of Milestones" in the specifications and the court agrees with this contention. According to the Schedule of Milestones there were only fourteen construction milestones; completion of each dorm (12) and completion of each campus (2).¹³⁹ The earliest milestone according to Recovery Schedule 2 was OSSB5 Complete on November 17, 2011. By that time OSFC had severely disrupted TA's work, had failed to obtain approved plans for construction, let alone completion of the dorms, had prevented TA from obtaining final inspection even if it had completed OSSB5 and had failed to furnish TA with full and complete plans to build the dorms. The court finds that OSFC was in material breach of the Contract from the moment TA mobilized on site and failed to cure its breach throughout construction.

The law applicable to enforcement of liquidated damages provisions as they relate to delay in performance of a construction contract is as follows:

[W]here an owner and a contractor are each responsible for a certain amount of unreasonable delay in completing the work, the owner is barred from assessing the contractor with liquidated damages for whatever delay might have occurred in the completion of the work.

Lee Turzillo Contracting Co. v. Frank Messer & Sons, Inc., 23 Ohio App.2d 179, 184, 261 N.E.2d 675 (1st Dist.1969), followed in *Carter Steel & Fabricating Co. v. Ohio DOT*, 102 Ohio Misc.2d 1, 721 N.E.2d 1115 (Ct. of Cl.1999).

[I]f the party seeking to impose a liquidated damages clause can be deemed by his actions * * * to have contributed to an unreasonable delay, a liquidated damages clause is not available to him.

¹³⁹The court distinguishes between pre-construction milestones (NTP, submittals, etc.) and construction milestones.

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Mount Olivet Baptist Church, Inc. v. Mid-State Builders, Inc., 1985 Ohio App. LEXIS 9120, *19, 1985 WL 10493 (Ohio Ct. App., Franklin County Oct. 31, 1985).

Unilateral and mutual delays, by which the owner causes some or all of his damages, cannot be the basis for his recovery of liquidated damages, absent a reasonable basis for apportioning those damages. *Id.* at *22.

To the extent that TA failed to complete any of the milestones, such failure was the result of unreasonable delay and material breaches of the Contract by OSFC. As such, OSFC is barred from enforcement of the liquidated damages provisions.

For all of the reasons set forth above, it is recommended that \$686,000 be awarded to TA for wrongfully withheld liquidated damages. TA is not entitled to overhead and profit as those amounts are already included in the wrongfully withheld liquidated damages (as payment due under the Contract), but it is recommended that TA recover prejudgment interest on the liquidated damages from the dates such damages were withheld, according to proof at a hearing to be scheduled.

11. Unpaid Contract Balance

TA seeks damages for the unpaid balance of its Contract. OSFC contends that TA offered no evidence as to its present contract balance. TA did present evidence of its present contract balance (TA-0732 and testimony of Koniewich). But the present balance does not establish the damages that TA is entitled to recover for OSFC's breach of contract. In order to recover damages for the unpaid balance of the Contract, TA must prove what it would have received under the contract if it had been performed, less the value to TA of relief from full performance. TA did not install the flooring and no deduct change order was executed for this reduced scope of work.

A plaintiff who prevails on a claim for breach of contract is entitled only to recover damages for defendant's breach of contract. Such damages may include the further compensation plaintiff would have received under the contract if it had been performed, less the value to plaintiff of his being relieved of the obligation of completing performance. In such a case,

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plaintiff has the burden of alleging and proving not only (a) what he would have received under the contract from the performance so prevented, but also (b) what such performance would have cost him or the value to him of relief therefrom. Unless he proves both of those facts, he cannot recover as damages the profits he would have earned from full performance of the contract.

Dugan & Meyers Constr. Co. v. State Dep't of Admin. Servs., 162 Ohio App.3d 491, 2005-Ohio-3810, 834 N.E.2d 1, ¶1 (10th Dist.).

There was evidence TA did not perform all of the original scope of work required. This reduction in scope of work was reflected in change orders during construction of the Dorm Project, so-called deduct change orders. All of the executed deduct change orders are accounted for in determining the balance of the Contract Sum. The base Contract Sum was \$3,975,000.00 (JX-A/1). According to testimony of Koniewich, net change orders added \$211,163.93 for an adjusted Contract Sum of \$4,186,163.93 (TA-0732).¹⁴⁰ OSFC did not dispute these numbers or offer any evidence contrary thereto.¹⁴¹ Koniewich also testified that TA received payments in the amount of \$3,361,558.51. Deducting the payments received from the adjusted Contract Sum leaves an unadjusted balance of \$824,605.42. This amount includes liquidated damages withheld in the amount of \$686,000.00. Deducting the liquidated damages withheld leaves an adjusted balance owing of \$138,605.42. TA is entitled to this amount less the value of any scope of work it was relieved from performing under the Contract.

a. Floor installation (value relieved). TA admitted that it did not install the flooring, although it did prepare the floor for installation and provided the materials. TA calculated its remaining labor costs at \$6,938.04, but the parties never signed a deduct

¹⁴⁰Net change orders include fully executed add and deduct change orders, JX-F-01 through JX-F26.

¹⁴¹OSFC did submit several unsigned change orders discussed below, but these provide no proof of value for work for which TA was relieved, nor do they change the Contract Sum.

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change order for installing the floors. It is reasonable to assume that TA applied for payment for all work actually performed and payments for this work were approved by OSFC. OSFC offered evidence of several change orders related to flooring, but they were not understandable enough to conclude that they should be deducted from TA's scope of work. As such, the court accepts TA's testimony of the value it was relieved for installation of flooring.

b. Unsigned Change Orders. OSFC offered several unsigned change orders into evidence, which it claims were sent to TA but which TA refused to sign. There was no evidence that TA received any of these proposed change orders. However, for purposes of this analysis, the court accepts that they were received by TA. Unsigned change orders do not modify the Contract and do not affect the Contract Sum.

In order to remove a scope item from TA's Contract, OSFC was required to comply with change order procedures in Article 7 of the General Conditions (JX-B/49-60). OSFC did not follow these procedures, but instead simply executed change orders with Altman without any evidence of notice to TA for work it claims was included in TA's Contract.¹⁴² These change orders with Altman are not considered credible evidence of the value of not installing the flooring. Accordingly, the court finds that this work was not in TA's original scope of work and as such TA was not relieved of performing it.

Defendant Exhibit II is for replacing escutcheons allegedly removed by painters. There is no evidence that TA was asked to perform this work and it cannot be determined whether the escutcheons were installed in sequence with the schedule. OSFC did not present any evidence to show that this work was within TA's scope of work and as such TA was not relieved of performing this work. Also, the court could not find any evidence in the record that SHP provided written notice to TA to correct this

¹⁴²Instead of following the process for deduct change orders, OSFC submitted Defendant Exhibits W, HH and JJ, change orders to the Altman Company who apparently was a contractor on the academic building. These change orders appear to involve flooring work at the dorms but they are not sufficient to determine costs avoided by TA or that such costs are reasonable.

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work as required by GC 2.16.1 (JX-B/26), nor did OSFC direct the court's attention to such evidence in its closing argument or post-trial brief. This change order did not decrease TA's Contract Sum.

Defendant Exhibit KK contains backup from which it cannot be determined whether this was work required by TA's original scope of work or damage caused by TA which it refused to correct. The court could not find any evidence in the record that SHP provided written notice to TA to correct this work as required by GC 2.16.1 (JX-B/26), nor did OSFC direct the court's attention to such evidence in its closing argument or post-trial brief. Accordingly, the court finds that this work was not in TA's original scope of work and as such TA was not relieved of performing this work. This change order did not decrease TA's Contract Sum.

Defendant Exhibit NN appears to include installation of crown molding and toilet rollers, but there is no reference to TA's original scope of work in the specifications. There is evidence regarding the toilet rollers (TA-0629) and it appears TA could never get direction from either SHP or LL as to the location for the toilet rollers. In fact, Change Order No. 15 removed the toilet tissue holders, including installation from TA's scope of work (JX-15/1). While TA was relieved from performing this original scope of work, the relief is accounted for in the adjustment to the Contract Sum in November 2011.

Defendant Exhibit QQ appears to be costs incurred by OSFC for replacing existing cabinets. The court cannot tell if this work was required because of a design error or was defective work. However, there was no evidence that SHP provided written notice to TA to correct this work as required by GC 2.16.1 (JX-B/26), or if it did, OSFC did not direct the court's attention to such evidence. Accordingly, this work was not in TA's scope of work and was not declared defective and as such TA was not relieved of performing this work. This change order did not decrease TA's Contract Sum.

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c. Other attempted back charges (unsigned change orders).

- i. **TP Mechanical Change Order No. 29 (Also unsigned Change Order No. 42 to TA).** OSFC executed Change Order No. 29 with TP Mechanical Contractors, Inc. (TP Mechanical) the prime contractor for plumbing on the Dorm Project (TA-0644/2). This change order was for \$68,631.48 and from the language of the change order it was alleged to be for delays caused by TA in connection with Recovery Schedule 3. There are several reasons why this change order is not a legitimate back charge to TA. First, Recovery Schedule 3 was never adopted by change order. Second, TP did not follow the Article 8 process for making a delay claim. Third, almost half of the change order is for material. "Material" is not a compensable cost for delay unless the delay caused an increase in prices for materials that could not be ordered because of the delay. There was no evidence of such increase in material costs submitted at trial. Fourth, in the backup documentation for this change order, TP Mechanical does not attribute any delay to TA. And finally, Change Order No. 42 to TA is not signed. This change order did not decrease TA's Contract Sum.
- ii. **Vaughn Industries Change Order No. 10 (Also unsigned Change Order No. 43 to TA).** OSFC executed Change Order No. 10 with Vaughn Industries. the prime contractor for HVAC on the Dorm Project (TA-0645/2).¹⁴³ This change order was for \$79,000 and from the language of the change order it was alleged to be for delays caused by TA in connection with Recovery Schedule 3. This change order is not a legitimate back charge to TA for some of the same reasons as the TP Mechanical change order and for another reason as well. First, Recovery

¹⁴³This Change Order No. 10 to Vaughn should not be confused with Change Order No. 10 to TA (JX-F-10), which is wholly unrelated.

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Schedule 3 was never adopted by change order. Second, there is no evidence that Vaughn followed the Article 8 process for making a delay claim. It did initiate a claim on December 19, 2011 (TA-0645/14) but it did not submit a certified claim, or at least there is no evidence that it did. However, the most telling aspect of its initiation of a claim is Vaughn's statement under GC 8.1.2.2 "[t]he exact reason for the project delay-hence Recovery Schedule #3, has not been officially identified or published by Lend Lease." In other words, neither Vaughn nor Lend Lease were blaming TA for the delay in December 2011, the timeframe when LL contends the delay began. And finally, the Change Order to TA (No. 43) is not signed by anyone and does not modify the Contract. This change order did not decrease TA's Contract Sum.

It is worth noting that LL did not even prepare Change Order Nos. 42 and 43 to TA's Contract until October 2012, 3-4 months after the change orders to TP (No. 29) and Vaughn (No. 10). Change Order Nos. 42 and 43 are not only unsigned, they are not supported by the evidence. The court sees these change orders as unwarranted and prepared for the sole purpose of gaining leverage over TA.

d. Punchlist Supplementation. OSFC issued proposed Change Order No. 49 to TA for a deduction of \$15,546.83 (TA-0647/2). This amount is allegedly for supplementing punchlist work by Altman Company. However, there is no punchlist attached to the change order to tell exactly what TA failed to do, if anything. There also was no evidence that SHP provided written notice to TA to correct this work as required by GC 2.16.1 (JX-B/26), or if it did, OSFC did not direct the court's attention to such evidence. There was evidence of SHP's failure to follow the Contract's punch list procedure and the many issues and frustration encountered by TA during the punchlist process (TA-0597, TA-0603 and TA-0629), e.g. SHP including extensive damage caused by other prime contractors for which OSFC was responsible. Change Order No.

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49 is not signed by anyone and does not modify the contract. This change order did not decrease TA's Contract Sum.

e. Fire-Rated Access Panels. OSFC issued proposed Change Order No. 50 to TA for a deduction of \$15,546.83 (TA-0648/2). This amount is allegedly for fire-rated access panels installed by Altman Company. Fire rated access panels were not included in TA's original scope of work. However, during 2011 after construction commenced SHP sought pricing for rated access panels from TA (PR#24) and TA provided pricing for installation of the panels. That pricing led to Change Order No. 20 (JX-F-20), which included an additional \$4,554.32 for rated access panels. Koniewich testified that TA installed the panels as specified in Change Order No. 20. The court believes the testimony of Koniewich and the court could not find any contemporaneous project records that contradict his testimony. If different access panels were later required by DIC and installed by Altman, that is a cost to OSFC, not TA. The change order is not signed by anyone and does not modify the contract. This change order did not decrease TA's Contract Sum.

Upon careful consideration of all of the foregoing unsigned change orders, testimony and other evidence, it is recommended that TA be awarded \$138,605.44, the remaining balance of the Contract (not including liquidated damages wrongfully withheld) less \$6,938.04 for the value relieved for installing the flooring, or the sum of \$131,667.40. It is further recommended that TA recover prejudgment interest on the unpaid contract balance from the dates such payments were due, according to proof at a hearing to be scheduled.

12. Summary of TA's Damages

The total recommended damages are as follows:

Description	Damages
DELAY	
Extended General Conditions	\$101,892.62
Extended Trade Supervision Costs	\$65,127.87
Extended Project Management Costs	\$52,406.65
Extended Equipment Rental Costs	\$0.00
Unprocessed Change Order & Scope Adjustments	\$0.00
Extended Home Office Overhead	\$0.00
LOSS OF PRODUCTIVITY	
Rough Carpentry Labor Loss of Productivity	\$507,426.07
DAMAGES CAUSED BY OTHERS UNDER OSFC'S CONTROL	
Additional Drywall Costs for Damage to TA's Work	\$139,263.82
Additional Painting Costs for Damage to TA's Work	\$153,619.92
PAYMENT DUE UNDER THE CONTRACT	
Liquidated Damages Withheld by OSFC	\$686,000.00
Payment of Contract Balance Withheld by OSFC (other than LDs)	\$131,667.40
TOTAL AMOUNT	\$1,837,404.35
Prejudgment Interest According to Proof	TBD

(Table 9)

VI. OSFC's COUNTERCLAIM.

In its counterclaim OSFC seeks damages from TA for: 1) costs of correcting defective roof work; 2) increased operating costs; 3) increased A/E and C/M fees and costs; and 4) paying claims of other contractors due to TA's impacts. Some of OSFC's claim for costs of correcting defective work was addressed above in Section V.D.11.

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entitled "Unpaid Contract Balance." None of the unsigned change orders addressed in that section support an award of damages to OSFC. The corrective work in this section addresses only the asphalt shingle roofs of the dorms as that was the sole claim presented at trial.¹⁴⁴

In answer to OSFC's counterclaim TA alleged that OSFC's losses and damages were caused by the acts, omissions, breach of contract, breach of warranty, and negligence of OSFC's representatives and agents, over which TA had no control. TA also alleged as affirmative defenses waiver, estoppel and that OSFC failed to mitigate damages.

A. Costs of correcting defective roof work.

The roofs installed by TA at each of the twelve buildings were a combination of one or more of three systems: 1) asphalt shingle; 2) standing seam panel; and 3) EPDM (rubber). OSFC's claim relates only to the asphalt shingle roofs on all twelve dorm buildings. OSFC contends that some of the buildings constructed by TA experienced leaks in the area of the roofs and that the asphalt shingle roofs on all twelve buildings need to be replaced. TA contends that the roofs were installed as designed, that any minor deviation from the specifications were not the cause of any roof failure, that SHP withheld critical information concerning installation of the perimeter underlayment, that OSFC prevented TA from observing replacement of the roof on OSSB1 during the pendency of this action notwithstanding TA's written request to be present, and that the cause of any leaks was poor design of the insulation by SHP.

OSFC did not present any physical evidence of defective roof materials or workmanship and the only photos were from TA's project records (Defendant Exhibit K) and were of little relevance. To support its claim, OSFC offered the testimony and

¹⁴⁴While not outcome determinative, it is noteworthy that OSFC did not address its counterclaim in any respect in its POST-TRIAL BRIEF or its PROPOSED FINDINGS OF FACT, filed on July 20, 2015.

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written report of its roofing consultant, Gary Mays (Mays). Mays conducted a forensic evaluation of the roofs, albeit limited in scope.

In 2014, OSFC engaged Mays, a roofing consultant with Mays Consulting & Evaluation Services, Inc. to investigate the leaks. Mays has extensive experience (over 50 years) with the installation of roofing systems. Such experience includes hands-on installation of all kinds of roofing systems including asphalt shingle roof systems, five years of trades training with Dow Chemical Company, consulting with architectural firms and for the last 23 years as a consultant with his company. Mays holds himself out as an independent consultant. Mays is not a registered architect nor a registered professional engineer, although he does have licensed design professionals on his staff. He is qualified to conduct forensic evaluations of installed roof systems such as those involved in the Dorm Project and to report his observations. He is not qualified to opine with respect to adequacy of design of the roof systems specifically or of the dorms generally by SHP insofar as whether such design met the standard of care for architects. He is qualified to report code deficiencies observed by him in the construction documents and the work he reviewed, but he is not qualified to interpret the plans and specifications in terms of how TA was to perform its work under the Contract Documents. He is also qualified to estimate the cost of remediating defective roof work, including the cost to remove and replace roofs such as those installed by TA.

Mays testified that he was asked to investigate the dorms and determine why they had leaked. According to James Luckino (Luckino), the expert for TA who was asked to opine on the roof issues and Mays' report, water incursion was only reported in three buildings; OSSB1, **OSSB2** and OSSB3.¹⁴⁵ On May 22, June 16 and June 17, 2014, Mays conducted his investigation of the roofs at four buildings; **OSSB2**, OSSB7, OSD3 and OSD7. The buildings evaluated by Mays were selected because they

¹⁴⁵OSSB2 is in italics/bold because it is the only building investigated by Mays that had any history of leaks.

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represented the two dormitory building types (ES/MS and HS) at each campus and because they were currently unoccupied. Mays did not explain why he did not investigate OSSB1 and OSSB3, although it is likely because they were currently occupied.

Mays conducted six test cuts at each building at specified areas of the eaves, rakes, rake walls and ridges to determine the conditions existing at those specific areas. He described the general locations of the test cuts in Defendant Exhibits MMM and NNN and to a lesser extent through testimony at trial. Mays did not actually observe any leaks at any of the roofs at any time during his investigation, nor did his report (Defendant Exhibit KKK) identify any specific location where there were leaks at the roofs on any of the four buildings he investigated. When challenged on his lack of proof of leaks, Mays testified that while he took many photographs during his evaluation of the roofs, he did not include them in his report because he had not been asked to produce a photographic report. This testimony conflicted with his written proposal to OSFC to conduct the roof system evaluation, wherein he indicated that he would provide a photographic report.¹⁴⁶

In general terms, Mays reported the following deficiencies/conditions observed during his site visits: a) failure of materials to meet specifications; b) failure to install perimeter underlayment as designed; c) failure to meet code requirements; and d) failure to install asphalt shingles in accordance with the manufacturer's instructions.

Mays' written report is almost entirely factual as was his testimony. He reported in summary fashion what he observed, what he concluded from reading the project records and who he believed was responsible for what he observed, but in his report

¹⁴⁶With TA's motion to exclude testimony of Mays filed on April 22, 2015 before trial, TA submitted various public records furnished to TA by counsel for OSFC, Mr. Jerry Kasai. Motion to Exclude, Exh. C. In responding to the motion, OSFC did not object to the court's consideration of these records. One of those records was Mays' company's June 3, 2014 proposal to conduct a roof system evaluation at OSD and OSSB. Motion to Exclude, Exh. C at pp. TA-PRR-000027-30. The proposal included, within its SCOPE OF SERVICES, to "[p]rovide a written report, **including photographic documentation**, detailing our findings and recommendations for corrective action . . ." [emphasis added]

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Mays only expressed one opinion. He opined that the deficiencies/conditions he observed represented a reasonable indication of typical conditions for all twelve dorms with asphalt shingle roofs, including those he did not investigate (Defendant Exhibit KKK, p. 1). As explained below, weighing the evidence offered by OSFC, and primarily Mays, the court finds that the Mays forensic evaluation did not reveal a reasonable indication of the typical conditions of the asphalt shingle roof systems on all twelve dorms.

Mays failed to account for the fact that many of the roofs were re-worked or replaced entirely by TA after it terminated its roofing subcontractor, AAA Roofing. Neither Mays' report or his testimony identified whether the roof areas he investigated were installed by AAA or during remediation/completion by others. To the contrary, he testified that his understanding was that the roofs were all constructed by the same contractor and in this regard he was uninformed. Without distinguishing between those roofs that were replaced or remediated and the roofs installed by AAA Roofing, the court finds it is not reasonable to assume that 6 small test cut areas on 4 of 12 roofs are representative of the entirety of all 12 roofs. The total area of the roofs was approximately 40,000 square feet.¹⁴⁷ A test cut area of 4' x 4' would yield 16 square feet and with 24 test cuts of similar size would yield a sampling of 384 square feet, or less than 1% of the total roof area. The court finds that based on a visual inspection of 384 square feet of roof it is not reasonable to assume that what lies beneath the other 39,616 square feet of roofing is the same, particularly where the roofing was installed by more than one roofing crew.

1. Failure of materials to meet specifications. In his report Mays stated that during his evaluation he did not find that the type of nails specified were used in the installation of the shingles--at least not in the test cuts he observed. He testified that he

¹⁴⁷This total area was calculated from the estimated square footage of each dorm according to Mays' report. (Defendant Exhibit KKK, p. 3.)

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found smooth-shanked electroplate nails instead of hot-dipped galvanized nails with barbed shanks. His report did not reflect an opinion on the effect, if any, of using the type of nails encountered during his investigation, although he did testify at trial that smooth shank nails would not secure the shingles as well as barbed nails. In his report, Luckino stated that such nails (barbed) have been out of circulation since the '60s when air nailing became the preferred method of installation.¹⁴⁸ Mays testified that barbed nails are the same as ringed shank nails and that ringed shank nails should have been used. However, ringed shank nails were not specified.

There was evidence that the roof on OSSB1 was replaced by OSFC in November 2014. There was also evidence that TA requested to be notified if and when any remedial action was taken with respect to the roofs so it could observe and preserve evidence presented during the tear off and replacement of the roof. (TA-0700) This would have presented an opportunity to see if smooth shank nails were used throughout the installation of the entire roof on OSSB1. As a result of OSFC's failure to notify TA of its intent to tear off and replace the roof at OSSB1, TA was deprived of the opportunity to observe and preserve evidence that might have been inconsistent with Mays report and testimony.¹⁴⁹ The court finds that installation of smooth shanked nails was a minor deviation from the specifications and that absent evidence that they contributed to leaks at the roofs investigated, TA did not breach the contract for failure to install hot-dipped galvanized barb shanked nails.

2. Failure to install perimeter underlayment as designed. In his report Mays is critical of the dimension and placement of the perimeter underlayment (Ice Guard) because it did not comply with the code requirements for steep roof installation and did

¹⁴⁸Luckino is a registered architect in Ohio and is qualified to render opinions regarding the design, installation and remedial requirements, if any, associated with the subject roofs. He is also qualified to interpret the construction documents to the extent that such interpretation is not of the legal effect, but rather technical in nature. His qualifications are set forth in Exh. TA-1203/12-14.

¹⁴⁹The evidentiary effect of this is discussed more fully below.

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not comply with the technical specifications.¹⁵⁰ While it is true that the Ice Guard was not installed as provided for in the specifications, i.e. 24" on the slope inside the exterior wall, the installation was installed in compliance with the location and dimensions for the Ice Guard as detailed on the plans, i.e. 24" from the edge. If a contractor installs work as shown on the drawings, it is not responsible for consequences of a defective design.

[T]he United States Supreme Court recognized that when a contractor is "bound to build according to plans and specifications prepared by the owner, the contractor will not be responsible for the consequences of defects in the plans and specifications."

Dugan & Meyers Constr. Co. v. Ohio Dep't of Admin. Servs., 113 Ohio St.3d 226, 2007-Ohio-1687, 864 N.E.2d 68, ¶26.

In his report, Mays stated that project specification takes precedence over the construction drawings and the specification clearly describes the required placement. Mays testified at trial that the drawing was not clear and should have been questioned by the contractor. Luckino, in his testimony, as well as his report, disagreed with Mays and opined that the drawing was clear and would prevail over the specification. The General Conditions of the Contract (JX-B/9) settles this issue in favor of Luckino's opinion as it provides at GC 1.4.1.5 that:

The Drawings govern dimensions, details and locations of the Work. . . .
The Specifications govern the quality of materials and workmanship.

Luckino's interpretation is correct. The perimeter underlayment was installed in accordance with the detail shown on the drawings and this was therefore in conformance with the Contract Documents. TA, having complied with the location and

¹⁵⁰Ice Guard is a proprietary name for a self-adhered, polymer modified bitumen perimeter underlayment material. Such underlayment is manufactured by more than one company and is identified by different proprietary names. There were several such products identified in the specifications, but "Ice Guard" is used here as a reference to the perimeter underlayment set forth in the plans, Exh. TA-901, Sheet A105 (plans) and the specifications, Exh. JX-E/92-93, Project Manual Vol.6.

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dimension of the Ice Guard as shown on the drawings is not responsible for damages caused by the design, whether code compliant or not. *Dugan & Meyers, supra*.

Moreover, there is no evidence that TA had knowledge of the conflict between the drawings and the specifications. However, there was evidence that SHP/Predovich did have such knowledge and kept it to himself. The issue of the Ice Guard deficiency/condition identified by Mays could have been avoided if Predovich had acted promptly and responsibly when he was made aware of the conflict in the early stages of construction. In an email (TA-0428) dated August 12, 2011, from Predovich to the DIC plans examiner (Jindal), Predovich admitted his knowledge of the conflict between the drawings and the specification based on a discussion he had with Jindal the day before. The timing of this discovery is important because it establishes the latest date (actually the day before) when SHP/Predovich became aware of the defect in the drawings. However, rather than correct the drawings and satisfy the plans examiner's concerns, Predovich represented to Jindal that he would work with the construction manager (LL) to confirm that the specification and not the detailed drawing "was carried out on the buildings that are under roof and all the remaining buildings to be roofed." Had Predovich followed through on this representation to DIC/Jindal, the Ice Guard deficiency/condition described by Mays, would have been resolved during construction. However, Predovich did not follow through.

Upon cross-examination, Mays testified that any time a design professional is made aware of an issue in the drawings by a code official he should correct the drawings. Here, according to McCarthy's as-built schedule (TA-1201/12-54), which the court finds is reasonably consistent with the project records, as of August 11, 2011 five of the asphalt shingle dorm roofs were installed, which necessarily included placement of the Ice Guard.¹⁵¹ Remediation of the five roofs already installed as well as code compliant installation of the remaining seven roofs could have been accomplished

¹⁵¹The Ice Guard is installed beneath the shingles.

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during construction had SHP not concealed this design problem from TA. However, given the budget constraints, compressed schedule and the myriad of problems that the drawings and specifications were causing on many fronts at that time, Predovich apparently opted to keep this information to himself.

SHP also had its own financial interest to consider. Had SHP alerted TA to the design error brought to his attention by DIC, TA would have been entitled to be paid for correction of the roofs already installed, which, according to Mays' estimate, could have been upwards of \$110,000.¹⁵² TA would also have been entitled to a substantial time extension.¹⁵³

It may also be that SHP was so sensitive to the budget constraints that it did not want to generate a Change Order for this issue.¹⁵⁴ It should be noted that the email to DIC (TA-0428) was not copied to Berardi/Matias, Maletz, LL or OSFC, and certainly not to TA. It appears that only Predovich was aware of the problem with the defective drawings.¹⁵⁵ Regardless, TA installed what was shown on the drawings and its responsibility ended there. To the extent the roofs were defective because of the improper placement and dimension of the Ice Guard, they were defective because of actions or inactions of SHP/OSFC over whom TA had no control.

TA is not liable to OSFC for the replacement of the Ice Guard.

3. Failure to meet code requirements for installation of the flashings.

There were no photos or other evidence establishing defective work as it related to the

¹⁵²This based on the removal and replacement of five of the twelve roofs, which included 3 high schools and 2 elementary/middle schools. Predovich was keenly aware of SHP's exposure for additional costs caused by changes required by DIC (TA-0166/1) and this was such a change.

¹⁵³"Design clarification or correction" is one of several boilerplate descriptions provided for in the Change Order form as a basis for the change.

¹⁵⁴Not knowing whether the design error would have been covered by an errors and omissions allowance between OSFC and SHP, it is not entirely clear what motivated SHP in this cover-up.

¹⁵⁵This lack of good judgment is an example of why SHP should not have had an unlicensed person fulfilling the role of a licensed architect during contract administration.

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flashings. The Mays report stated that the step flashings were not installed in accordance with the Project Manual but failed to reference any specification. He also stated that the step flashings were not installed in accordance with the manufacturer's installation instructions, yet he did not attach any such instructions to his report nor were they introduced as evidence at trial. Mays' report and testimony regarding improper installation of the step flashing is without evidentiary support and is otherwise not persuasive.

4. Failure to install asphalt shingles in accordance with manufacturer's instructions. Once again, Mays' report fails to refer to specific instructions by the manufacturer for the installation of the asphalt shingle system. At trial Mays did testify from his personal knowledge regarding nailing, but he did not refer to any specific instruction by the manufacturer, nor were the manufacturer's instructions introduced at trial. Mays' testimony regarding TA's alleged failure to install the shingles in accordance with the manufacturer's instructions is without evidentiary support and is otherwise not persuasive.

5. Causes of roof leaks. In his report, Mays does not express any opinion that any of the deficiencies/conditions he observed caused the roofs to leak. He also did not opine in his report that the observed deficiencies/conditions could only be cured by a complete removal and replacement of the asphalt shingle roof on each building. His written report did not indicate where any leaks were indicated or where such leaks originated. At trial Mays was asked if he had an opinion on the cause of the leaks at the roofs and without objection he opined that the leaks were caused by the defective roof system installation, yet he could not identify a single location where any of the roofs actually leaked. Instead, he testified that the deficiencies were so pervasive that they must have been the cause of a leak somewhere in the locations where he found such deficiencies. When pressed on this issue on cross-examination it was clear to the court

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that his determination that the roofs leaked and the locations of those leaks was theoretical and not factual.¹⁵⁶

On the other hand, Luckino noted that the only leaks reported were in OSSB 1, 2 and 3. These buildings, according to Luckino's understanding, leaked in the months of January and February and all three buildings shared a northern exposure with little direct sun to aid in melting accumulated snow. Luckino pointed out that 8" thermal insulation was specified for installation directly beneath the roof. However, TA was required by SHP's design to compress this insulation into a 4" space, particularly in the areas where ice damming occurred. This, according to Luckino was a design error. When installed as designed the thermal insulation was compressed, thereby reducing its insulating effectiveness by as much as 43%. To the extent there were roof leaks, Luckino opined, they were caused by improper design for installation of the thermal insulation, causing excessive heat loss through the roof system, which would in turn cause the ice to melt rapidly and back up under the shingles and into the building.

To the extent there was ice damming and resulting water intrusion at OSSB 1, 2 and 3, the court finds that it was caused by defective design of the thermal insulation in combination with the defective design of the Ice Guard dimension and placement, and not by TA's work. A contractor who builds according to a design is not responsible for damages caused by the design. *Dugan & Meyers, supra*.

6. OSFC's failure to produce better evidence available to it. The manufacturer's installation instructions were not included with Mays' report nor were they introduced as evidence at trial although it is reasonable to believe that they were in the possession of or available to OSFC/Mays prior to or at the time of trial.¹⁵⁷ Specified

¹⁵⁶ Mays and Luckino both testified that during Mays' investigation that a few minor cuts in some areas of underlayment were observed, probably from a worker's knife, but these were not conclusively thought to be a source of roof leaks.

¹⁵⁷ Mays did testify that the manufacturer's installation instructions were included with each bundle of shingles and that there would have been approximately 1200 bundles of shingles on the job site. Mays

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materials (nails) which Mays identified as nonconforming were observed by Mays during his evaluation and available to him, but none of them were produced as evidence at trial. According to Mays, photographs of his forensic investigation were taken, but no such photographs were included with Mays' report, nor were they produced at trial.

During the pendency of this action OSFC replaced the asphalt shingle roof at OSSB1 in November 2014 and yet OSFC failed to produce any evidence of the cost of such replacement or any report of deficiencies noted. The evidence available during the tear-off of OSSB1 would have been particularly relevant to either corroborate or controvert Mays' testimony that the conditions he observed in the test areas on other roofs were representative of conditions on all twelve dorms.

It is reasonable to infer that all of this evidence was available to OSFC prior to and at the time of trial. The evidence available during the tear-off and replacement at OSSB1 would have been available to TA if it had been notified and offered an opportunity to observe the roof replacement, which it requested the opportunity to do. Such evidence, if produced, would be, in the view of the court, better and stronger evidence of liability and damages. The court considers the evidence submitted by OSFC regarding the alleged roof defects and damages it claims to have sustained to be weaker than evidence available to OSFC but not produced. Accordingly, the court presumes that such other evidence, if produced, would have been unfavorable to OSFC.

It has been held when the state fails to produce readily available evidence, this may raise doubt with respect to an issue in question. *State v. Manago* (1974), 38 Ohio St.2d 223, 227, 313 N.E.2d 10, citing *State v. Farmer* (1951), 156 Ohio St. 214, 102 N.E.2d 11. Indeed, the Farmer court wrote: "It is a well-established rule that where relevant evidence which would properly be part of a case is within the control of the party whose interest it

also indicated that the roofing shingles were manufactured by GAF. As it was OSFC's burden of proof on its counterclaim for damages caused by defective work, it was not TA's obligation to present any evidence of the manufacturer's installation instructions in its defense.

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would naturally be to produce it, and fails to do so, without satisfactory explanation, the jury may draw an inference that such evidence would be unfavorable to him. This rule is uniformly applied by the courts and is an integral party of our jurisprudence. If weaker and less satisfactory evidence is given and relied on in support of a fact when it is apparent to the court and jury that proof of a more direct and explicit character is within the power of the party, it may be presumed that the better evidence, if given, will be unfavorable to him. * * * *Id.* at 225, quoting 20 American Jurisprudence, 188 et seq., Section 183. (Emphasis added).

State v. Mayhew, 1993 Ohio App. LEXIS 1861, *13-14, 1993 WL 104862 (Ohio Ct. App., Franklin County Mar. 30, 1993).

The court finds that OSFC has failed to prove by a preponderance of the evidence that TA breached its contract with OSFC when it installed the asphalt shingle roofs on all twelve buildings or any of the buildings and further that it failed to prove damages with reasonable certainty.

Accordingly, it is recommended that OSFC not be awarded damages for the cost of replacing the asphalt shingle roofs.

B. Increased operating costs.

OSFC did not submit any evidence to support an award of damages for increased operating costs. Moreover, such damages, if any, were not caused by TA, but were the result of actions and inactions of OSFC and its representatives, SHP and LL.

Accordingly, it is recommended that OSFC not be awarded damages on its counterclaim for increased operating costs.

C. Increased A/E and C/M fees and costs.

OSFC did not submit sufficient evidence to support an award of damages for these fees and costs against TA. Moreover, such damages, if any, were not caused by TA, but were the result of actions and inactions of OSFC and its representatives, SHP and LL. Accordingly, it is recommended that OSFC not be awarded damages on its counterclaim for increased A/E and C/M fees and costs.

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D. Paying claims of other contractors due to TA's impacts.

Payments to other prime contractors for what OSFC described as delays caused by TA to TP Mechanical and Vaughn Industries (TA Change Orders 42 and 43) were purely voluntary on OSFC's part, were not supported by any evidence of delay by TA and were the result of a process that ignored the Article 8 provisions of the General Conditions.¹⁵⁸ Keith admitted that these change orders were not initiated by a pricing (or proposal) request from OSFC/LL/SHP. He also admitted that the Article 8 process was not followed in the case of TP Mechanical, but was followed in the case of Vaughn. However, as discussed above, while Vaughn initiated a claim, it never filed a certified claim as required by Article 8. Although Keith claimed he negotiated the amount of the TP mechanical claim in the field, the evidence is to the contrary. TP Mechanical did not give notice of a claim nor did it submit a certified claim for these alleged delay damages. Instead, TP Mechanical simply submitted a letter proposal for the full amount of Change Order No. 42 that was ultimately accepted by OSFC without change and the quote was dated almost seven weeks after the alleged delay period began. TA Change Order No. 43 followed a similar process (and did not adhere to the Article 8 requirements), although it appears that LL/Keith did negotiate the amount with Vaughn Industries.

While each of these deduct change orders contain language inserted by LL that they were paid because of delays caused by TA, the self-serving language that TA caused delay to TP or Vaughn is not proof of such delays. Neither Vaughn nor TP attributed any delay to TA when they requested additional payment from OSFC. To the contrary, in its Article 8 notice Vaughn stated that LL "had not published a cause of the delay."

Accordingly, it is recommended that OSFC not be awarded damages on its counterclaim for payments made to other prime contractors.

¹⁵⁸To avoid confusion it should be noted that (TA) Change Order No. 42 includes a copy of (TP Mechanical) Change Order No. 29 (TA-644/1-2). Similarly, (TA) Change Order No. 43 includes a copy of (Vaughn) Change Order No. 10 (TA-645/1-2).

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VII. CONCLUSION

The OSBD Project presented OSD and OSSB with an opportunity to update their facilities and improve their services to the deaf and blind children of Ohio and to their families. However, politics and budgeting problems brought forth all of the regrets that such forces can bestow on people who are otherwise well-intentioned. What should have been a 3-4 year project became a 5-6 year project. When it fell behind schedule and came under pressure to get the Project moving, OSFC solicited bids without plan approval for the dorms, not once, but twice, and not knowing if and when it would get plan approval. TA was never issued approved plans to build the dorms before or during construction. What should have been a properly designed and permitted project became chaotic with incomplete and confusing drawings, drawings which OSFC/LL insisted TA use to construct the dorms, exacerbated by SHP's slow response to RFIs and LL's heavy-handed construction management, all in the interest in meeting what was an unrealistic schedule burdened by a strained budget.

As the architect, SHP assigned an unlicensed person to manage the project during construction contrary to its contract with OSFC. SHP's consultant, Berardi, was routinely dilatory in delivering a buildable design and in fact never delivered one in acceptable form for issuance to TA by LL. To deflect attention away from the design issues and its own inability to manage the project, LL took the opportunity at every turn to accuse TA of poor performance and not managing its subcontractors adequately. While TA indeed had problems with its subcontractors, they paled in comparison to the impacts of the poor design and unrealistic schedule that TA was required to work with. For the most part, LL kept OSFC in the dark about many issues that were detrimental to the progress of the design and construction of the Dorm Project.

It is clear and convincing to the court that by its conduct, OSFC waived strict compliance with GC Article 8 and is estopped to assert the waiver provisions of Article 8 as a defense to TA's claim. There was something more than OSFC's actual notice of

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the problems with the drawings here that supports waiver and estoppel. There was actual notice of the problems coupled with a pattern of repeated misrepresentations by LL that TA would receive a buildable set of plans. For five months after TA's Article 8 notice was served TA was told by LL that the requested drawings were just around the next corner. TA took LL's representations as true and pushed forward (actually ahead of schedule early on) with construction. Only when TA was fully committed to the Dorm Project and it was too late to turn back, did LL reveal that the much needed plans would not be furnished.

TA has proven by a preponderance of the evidence that OSFC breached the Contract and that such breach caused TA the damages as calculated above. Conversely, OSFC did not prove by a preponderance of the evidence that TA breached the Contract as it related to construction of the roofs on the dorms, or in any other respect that damaged OSFC. While OSFC bears the primary legal responsibility for TA's damages as the owner of the Dorm Project, from the evidence submitted at this trial TA's losses were, for the most part, caused by the conduct of its authorized agents, LL and SHP, and by SHP's consultant, Berardi.

VIII. RECOMMENDATION

It is recommended that TA be awarded damages in the amount of \$1,837,404.35 against OSFC together with prejudgment interest according to proof, and that OSFC recover nothing by way of its counterclaim. All other claims, damages and costs prayed for should be denied as not supported by the greater weight of the evidence.

A party may file written objections to the magistrate's decision within 14 days of the filing of the decision, whether or not the court has adopted the decision during that 14-day period as permitted by Civ.R. 53(D)(4)(e)(i). If any party timely files objections, any other party may also file objections not later than ten days after the first objections are filed. A party shall not assign as error on appeal the court's adoption of any factual finding or legal conclusion, whether or not specifically designated as a finding of fact or

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conclusion of law under Civ.R. 53(D)(3)(a)(ii), unless the party timely and specifically objects to that factual finding or legal conclusion within 14 days of the filing of the decision, as required by Civ.R. 53(D)(3)(b).


SAMUEL WAMPLER
Referee

cc:

Bradley Jay Barmen
1375 East 9th Street, 16th Floor
Cleveland, Ohio 44114

Celia M. Kilgard
Craig B. Paynter
James David Abrams
65 East State Street, Suite 1000
Columbus, Ohio 43215-4213

Craig Douglas Barclay
Jerry K. Kasai
William C. Becker
Assistant Attorneys General
150 East Gay Street, 18th Floor
Columbus, Ohio 43215-3130

David Michael Rickert
110 North Main Street, Suite 1000
Dayton, Ohio 45402

Donald W. Gregory
Michael J. Madigan
Peter A. Berg
Capitol Square Office Building
65 East State Street, Suite 1800
Columbus, Ohio 43215-4294

George Hudson Carr
Steven George Janik
9200 South Hills Boulevard, Suite 300
Cleveland, Ohio 44147-3521

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