

Breaking Down the Walls: A Series on Construction Delay

In the fast-paced world of construction, delays can pose significant challenges to project success. In this *Breaking Down the Walls* series, Gary Brummer, a partner at Margie Strub Construction Law LLP, and Jacob Lokash, an associate at the firm, draw upon their extensive legal expertise to explore the complexities of construction delays. They have collaborated with Thomas Certo, a senior director in the Construction Disputes and Advisory Group at Ankura Consulting Group, LLC, whose insights into the technical aspects of delay analysis provide a comprehensive perspective on this critical issue.

Together, they simplify the fundamentals of construction delays, providing readers with the necessary tools to proactively identify and assess delays on their own projects in Canada. At the end of this six-part series, we will have explored the following topics:

1. Delay Claim Basics
2. Delay Damages
3. Disruption vs. Delay
4. Concurrent Delay
5. Forensic Schedule Analysis Techniques
6. Construction Delay Best Practices in Canada

In Part 1, *Delay Claims: Understanding the Basics*, we introduced the concept of construction delay and discussed how delays on a construction project are generally classified as either critical or non-critical, excusable or non-excusable, and compensable or non-compensable. These classifications were summarized in the decision tree in Figure 1 below.

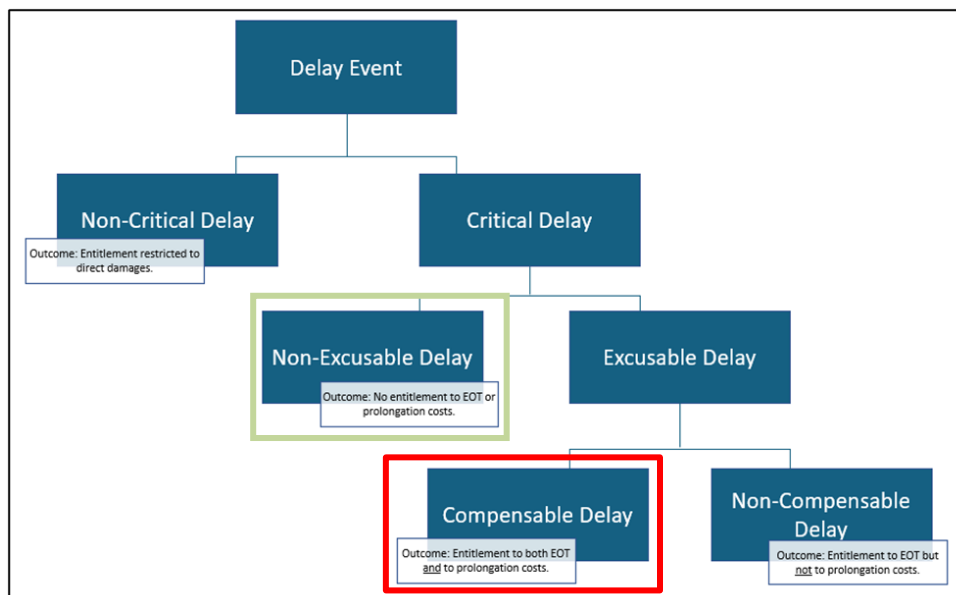


Figure 1 - Delay Claim Decision Tree

The decision tree concludes that a contractor's entitlement to claim delay damages is generally limited to instances where there exists a delay which is critical, excusable, and compensable (identified by the red box in Figure 1, above).

Likewise, an owner (or owner's representative) is generally entitled to claim damages for delay in instances where there is a critical, non-excusable delay (i.e., contractor caused delays that result in missing the agreed completion date) identified by the green rectangle in Figure 1, above.

In Part 2 of *Breaking Down the Walls: Time is Money - Understanding Delay Damages*, we focus on the damages that are often claimed as a result of critical, excusable, and compensable schedule delay.

Time is Money - Understanding Delay Damages

Delay damages, also referred to as 'prolongation' costs, are generally considered to be the time-related costs incurred because of delay to a project. In this article, we explore some of the key aspects of delay damages, including:

- A. Distinguishing delay damages from discrete damages,
- B. Typical contractor delay damage categories,
- C. Typical owner delay damage categories,
- D. Determining the period of time that delay damages should be quantified, and
- E. The legal framework for claiming delay damages in Canada.

A. Distinguishing delay damages from discrete damages

One of the core principles in the Society of Construction Law's Delay and Disruption Protocol ("SCL Protocol") provides the following outline of what 'prolongation' costs (or delay damages) include:¹

Unless expressly provided for otherwise in the contract, compensation for prolongation should not be paid for anything other than work actually done, time actually taken up or loss and/or expense actually suffered. In other words, the compensation for prolongation caused other than by variations is based on the actual additional cost incurred by the Contractor. The objective is to put the Contractor in the same financial position it would have been if the Employer Risk Event had not occurred.²

The SCL Protocol limits prolongation claims to those costs would make the parties "whole" had the delay event not occurred, unless otherwise stipulated in the contract. A fundamental characteristic of delay damages is that they are limited to the time-related costs actually incurred by the parties. The time aspect of delay damages will be discussed in more detail later in this article.

Delay damages can be contrasted from the additional, discrete costs directly attributable to a change in work or scope. Discrete damages are separate from delay damages and may be incurred whether the discrete impact results in delay. Therefore, if a discrete damage event does result in critical project delay, the delay damages should be assessed and put forth separately from the discrete costs, when possible.

¹ 2nd edition, February 2017

² Paragraph 2, Guidance Part A: Delay, Disruption and Acceleration Concepts, SCL Protocol

This distinction can be illustrated by a simple example. Let's say a design issue arises which is causing critical path delay to the project. To resolve the issue, the contractor's project manager retains a specialist to evaluate the owner-issued design. The specialist's time is not a delay cost – it is related to a discrete additional task – and should be claimed as a discrete cost. However, the project manager's cost would be included in the delay damages as it is a time-driven expense. The project manager, as a dedicated project resource, is now required on the project for longer than planned because of the critical path delay. Using the same example, if the delay were not critical, the specialist's time could still be claimed as a discrete damage claim, but the project manager's time would not.

In summary, discrete damages are specific, not time related, and tied to individual events or impacts, whether or not there is a critical path delay to the project. Delay damages, on the other hand, capture the time-related impact of extended project durations. This article focuses on the latter: delay damages.

B. Contractor Delay Damages

Contractors and owners feel the financial pain of delay in different ways. In broad terms, a contractor's pain is driven by committing resources to the project for longer than planned, and an owner's pain is driven by the inability to utilize the constructed asset. It follows, then, that prolongation costs included in a contractor's delay claim may differ from the prolongation costs included in an owner's delay claim.

A contractor's delay damages can materialize both on site (in the "field" or, "on-site") and at the contractor's home office (or "off-site").

(i) Extended Contractor Field Costs

Under a typical construction agreement, the contractor is responsible for supplying the resources necessary to support construction. These costs are often referred to as "indirect" or "general condition" costs, and the agreement may even include a schedule outlining the monthly general condition expenses. If a compensable delay is encountered, a contractor may be entitled to claim for these extended general conditions. It is important to note that only time-related general condition costs should be included in a contractor's delay claim – as opposed to discrete general condition costs.

When delays occur, general condition costs continue to accrue even if construction is stalled, resulting in added costs to the contractor. For example, rental payments for a site office trailer are time-driven, while contractor mobilization and demobilization are generally considered task-related, because they are incurred regardless of project duration.

While each project will have its own time-related costs, the following general condition cost categories are commonly included in a contractor's delay claim:

- ✓ Project-specific field staff,
- ✓ Site office rental,
- ✓ Site maintenance,
- ✓ Site office equipment,
- ✓ Temporary utilities,
- ✓ General site equipment, and
- ✓ Project insurance.

A claim for general condition costs is often calculated as an "average daily rate" multiplied by the number of critical path days of delay.

(ii) *Increased Contractor Direct Costs*

Project delays can also result in increased direct costs, including labour, equipment, and material costs. When a contractor's period of performance is shifted to a later time, there are several areas where increased costs may occur. These include:

- ✓ Standby time waiting to proceed on a delayed work front,
- ✓ Storage/warehousing costs for procured materials which cannot be installed,
- ✓ Price escalation associated with inflation, market changes, or union agreements, and
- ✓ Non-availability of specialty subtrades, equipment, or materials which require a more expensive substitute or replacement.

Many contracts include a clause requiring a contractor to mitigate its damages while delayed, such as standing down trades or resequencing work. However, these additional costs may be unavoidable depending on the project and circumstances. For example, projects delayed in the COVID-19 pandemic highlight these escalation costs.

As the construction industry has seen, the COVID-19 pandemic significantly disrupted global supply chains, leading to widespread shortages, shipping delays, and unprecedented price escalations for materials and labor. These disruptions have impacted construction projects around the world, compelling contractors to navigate a volatile market where costs can fluctuate dramatically. Depending on the contractual provisions and factual circumstances, these cost fluctuations have been claimable in certain instances.

To successfully claim for such price escalation, parties must demonstrate that there is a causal link between the delay and the increased costs. Quantification of the associated damages is fundamentally a comparative exercise, where documentation is critical to the success of a contractor's claim. Simply, records related to bid pricing, price changes, supply chain disruptions, and supporting communications, can make or break a claim.

As a final comment on increased direct costs, contractors often submit delay claims which include alleged cost impacts from lost labour productivity. While some productivity losses may be linked to project delays, these claims are typically treated separately from quantification of delay damages. We will cover this topic in Part 3 of this *Breaking Down the Walls Series: Delay vs. Disruption*.

(iii) *Extended Home Office Overhead*

A contractor typically maintains a "home office" away from site which incurs its own operational costs to support the project. These off-site operational expenses are not specifically related to one project and include items such as rent, management and administrative staff, marketing, and other costs which allow the home office to function and support the contractor's portfolio of projects.

Home office overheads can be categorised as dedicated overheads or unabsorbed overheads. Diligent contractors may, through careful record keeping, allocate certain costs or time to a specific project or

even delay event.³ In such instances, it may be possible to accurately apportion these costs to quantify delay damages, leading to a straightforward claim calculation. However, where these records are not available, contractors often rely on an estimation of the unabsorbed overhead amount associated with a specific project.

The entitlement and methodology for quantifying a contractor's claim for home office overheads, particularly through use of a formula, are debated topics in the industry. On entitlement, the SCL Protocol recommends that a certain burden of proof lies with the contractor to show that the contractor was unable to pursue other work because of the delay:

If the Contractor intends to rely on the application of a formula for the assessment of lost profits and unabsorbed head office overheads, it will first need to produce evidence that it was unable to undertake other work that was available to it because of the Employer Delay. These records may include the Contractor's business plans prior to the Employer Delay, the Contractor's tendering history and records of acceptance or rejection of tender opportunities depending upon resource availability.⁴ [emphasis added]

Apart from entitlement, unabsorbed head office overheads can often be difficult to calculate, particularly in large corporations with numerous active projects that are being constructed simultaneously. There is simply no standard methodology appropriate for every claim situation. For this reason, various formulae have been developed as quantification tools to estimate a contractor's loss. The SCL Protocol prefers use of the Emden and Eichleay formulae.⁵

The Emden formula, commonly used in the UK, calculates a contractor's overhead losses as a proportion of the contract amount during the planned period of performance. This formula is based on the contractor's historical average overhead and profit margin,⁶ which is applied to the contract amount. The Emden formula can be defined as:

$$\text{Home Office Overhead Loss} = \text{Contract Value} \times \frac{\text{Company Overhead \& Profit}}{\text{Company Revenue}} \times \frac{\text{Period of Delay}}{\text{Planned Contract Period}}$$

Take for example a \$1M contract which had an original duration of 100 days, with 25 additional days of compensable delay. If the contractor's overhead and profit that year was \$500k on a total business revenue of \$5M, the contractor's overhead compensation under the Emden formula would be \$25K.⁷

In contrast, the Eichleay formula, commonly used in the US, is based on the contractor's home office effort during the actual period of delay for the project in question rather than its historical performance.

³ As a best practice, contractors should track time and resources, where possible, to a specific project, especially when delays are encountered. Submitting a claim based on actual records is preferred to using the unabsorbed home office formulae. More best practices will be covered in Part 6 of this *Breaking Down the Walls Series: Delay Best Practices in Canada*.

⁴ SCL Protocol, paragraph 1.28

⁵ SCL Protocol, paragraph 2.11, cautioning that "However, in relation to the Eichleay formula, if a significant proportion (more than, say, 10%) of the final contract valuation is made up of the value of variations, then it will be necessary to make an adjustment to the input into the formula, to take account of the fact that the variations themselves are likely to contain a contribution to head office overheads and profit."

⁶ This overhead and profit margin is typically determined via an audit of the contractor's records for a multi-year period.

⁷ Overhead Compensation = \$1M x (\$500k/\$5M) x (25 days/100 days) = \$25k

This approach tends to provide a more precise estimate of the home office loss from a delay, but also requires more precise financial records. This calculation can be summarized in three steps:

Step 1 – Determine the allocation of contract billings to overall company billings during the contract period of performance:

$$\text{Allocable Overhead} = \frac{\text{Total Contract Billings}}{\text{Total Company Billings}} \times \text{Total Home Office Overhead}$$

Step 2 – Determine the daily allocable overhead rate using the period of contract performance (including delays):

$$\text{Daily Allocable Overhead Rate} = \frac{\text{Allocable Overhead}}{\text{Duration of Contract Performance}}$$

Step 3 – Determine the estimated home office overhead loss during the compensable delay:

$$\text{Home Office Overhead Loss} = \text{Daily Allocable Overhead Rate} \times \text{Compensable Days}$$

Using the same example project as above, the Eichleay formula results in an estimated \$20k in home office overhead losses for the same delay, or 20% lower than when using the Emden formula.⁸

Although courts in Canada have accepted use of both the Emden and Eichleay formulae, a contractor should be prepared to prove that the delay caused a loss, and that the loss could not be mitigated.

This article speaks to the Emden and Eichleay formulae, but other formulae have been successful in asserting and defending claims for damages such as the Manshul and Hudson formulae. The authors are not endorsing any specific formula as best, because the formula selection is ultimately dependent on specific project facts and availability of information. That said, consulting with experienced legal counsel and quantum experts will help a contractor put their strongest claim together based on the facts at hand.

C. Owner Delay Damages

If a forensic delay analysis concludes that the contractor caused a non-excusable delay, the owner may be entitled to claim delay damages from the contractor. These damages can be outlined in the contract as liquidated damages, or they can be quantified discretely based on the actual damage suffered.

(i) Liquidated Damages

Owners often pre-estimate their delay damages in the form of liquidated damages, which are reflected as a fixed amount payable for each day (or some other unit of time) past the contractually agreed project completion date. In Canada, liquidated damages are deemed enforceable where they represent a genuine pre-estimate of the damages an owner will likely suffer because of delay caused by another party. Where it is apparent that a liquidated damage amount is excessive and objectively unreasonable, the courts may declare it a penalty and therefore unenforceable.

Because liquidated damages are a predetermined amount, a savvy contractor may evaluate its own costs against the liquidated amount to understand the cost-benefit of mitigating a non-excusable delay.

⁸ **Step 1:** Allocable Overhead (\$100K) = (\$1M/\$5M) X \$500k; **Step 2:** Daily Allocable Overhead (\$800 per day) = \$100k/125 days; **Step 3:** Home Office Overhead Loss (\$20K) = \$800 X 25 days.

In this way, liquidated damages are not a deterrent to contractor delay, but rather a contractual vehicle for the owner to recover its estimated losses.⁹

In the absence of a liquidated damages clause, or if the liquidated damages expire after a certain number of delay days, an owner may be entitled to recover its actual delay damages. The contract will typically outline the owner's and contractor's rights to claims and damages.

(ii) *Actual Owner Delay Costs*

An owner's delay damages are typically based on losses incurred from restricted use and enjoyment of the constructed asset, which may include:

- ✓ Storage costs,
- ✓ Additional or lost rental income,
- ✓ Extended project staff,
- ✓ Temporary lodging/space,
- ✓ Additional financing costs,
- ✓ Damages claimed by follow-on contractors, and
- ✓ Lost revenue of profits.

Recovery of these costs, however, is dependant on the type of project and the terms of the contract. Ultimately, each project is different and the contract between the parties is the guiding force to what can and cannot be included in a claim for delay damages by an owner.

Accurate and timely records are vital for assembling a strong claim for delay damages. Delay claim best practices, including guidelines for managing cost records when delays are encountered, will be discussed in Part 6 of this *Breaking Down the Walls Series: Construction Delay Best Practices in Canada*.

D. Operative Date for Determining the Delay Damages

According to the SCL Protocol,

*Once it is established that compensation for prolongation is due, the evaluation of the sum due is made by reference to the period when the effect of the Employer Risk Event was felt, not by reference to the extended period at the end of the contract.*¹⁰

Calculating delay damages based on the period when the delay is "felt", rather than at the end of the project, is essential for an accurate assessment of costs. During the peak phases of construction, daily on-site expenses – such as project management, supervision, equipment rentals, and temporary facilities – are generally at their highest, as multiple trades and resources are engaged simultaneously. However, as the project nears completion, activity typically tapers off, and these on-site overhead expenses reduce significantly. If damages were calculated with reference only to the extended period at the project's end, when fewer resources are required, the true financial impact of the delay on the contractor would be underrepresented. By focusing on the actual period of critical path delay, the calculation better reflects the appropriately higher "burn rate" experienced during the more intensive phases of construction, resulting in fairer compensation that aligns with the contractor's actual losses.

⁹ Theodore J. Trauner, *Construction Delays: Documenting Causes, Winning Claims, Recovering Costs* (1990), 115.

¹⁰ SCL Protocol, paragraph 22

Naturally, the relevant period used for the quantification of delay damages will be determined on a case-by-case basis.

The authors have mentioned (and will continue to mention) that the contract is the guiding force in assembling and presenting delay claims. An option available to the parties during a contract negotiation is to include a liquidated amount that will apply when delays arise. In this way, the dispute is focused on apportioning responsibility for delay. This streamlines the dispute resolution process and can greatly reduce the cost of retaining quantum experts and lawyers to assert or defend a delay claim.

E. Legal Framework for Claiming Contractor Delay Damages in Canada

(i) Relevant case law

The delay cost categories outlined above (specifically, the contractor delay damage categories) find support in *Schindler Elevator Corporation v. Walsh Construction Company of Canada* (“**Schindler**”). There, Master Robinson summarised the seminal cases that preceded his judgment:¹¹

As explained by McRae J. in Brule Construction Ltd. v. Ottawa (City) (1989), 14 A.C.W.S. (3d) 121 (Ont. H.C.) [1989 CarswellOnt 688 (Ont. H.C.)] at para. 25, there are numerous consequential losses that may be suffered by a contractor when a contract is delayed:

25 When a contract is delayed, there are numerous consequential losses which may be suffered by the contractor. These losses are outlined in I.N. Duncan Wallace ed., Hudson's Building & Engineering Contracts, 10th ed. (London: Sweet & Maxwell, 1970) at 597-598;

(a) When delay in completion of the whole project results, a contractor will usually suffer:

*(i) a loss owing to the fact that his **off-site overheads**, which will partly be independent of the actual site expenditure or even the period the contract takes to complete (such as head-office rents) and partly may be dependent (such as additional administrative expenditure in relation to a dislocated and longer contract) will have either increased in the latter case, or need to be recovered from a smaller annual turnover than that budgeted for in the former case;*

*(ii) a loss of the **profit-earning capacity** of the particular contract organisation affected, due to its being retained longer on the contract in question without any corresponding increase in the monetary benefit earned and without being free to move elsewhere to earn the profit which it otherwise might do;*

*(iii) an increase of cost in his running **on-site over-heads**, that is to say those elements of cost directly attributable to the contract which are governed by time and which are independent of the amount of work carried out — for instance supervisory costs, costs of permanent plant such as site huts, and certain special plant needed throughout the work;*

*(iv) in a contract without an applicable fluctuations clause, the **inflationary or other increases in the cost of labour or materials** (less any decreases) which he would not have incurred but for the delay.*

¹¹ *Schindler* at para 302

(b) Whether or not delay in completion results, the disturbance of a contractor's progress or planning may also result in lower productivity from the contractor's plant or labour.

[emphasis added]

When discussing delay damages, it is crucial to exercise caution with terminology, as definitions and interpretations can vary significantly across jurisdictions. Terms like “liquidated damages,” “direct damages,” and “consequential damages” may carry different meanings depending on local laws and practices, leading to potential misunderstandings. Moreover, the approaches to calculating and enforcing these damages can differ widely, influenced by regional legal frameworks and industry standards. Consequently, stakeholders involved in construction and contractual disputes should ensure they have a clear understanding of the specific terms and concepts relevant to their jurisdiction to avoid miscommunication and misapplication of the law.

In this instance, the court’s reference to “*consequential*” should not be confused with so-called “special damages”, but rather as a reference to causality (i.e. as a consequence). Be that as it may, the operative portion of this excerpt is the four categories of losses that can generally be claimed as a result of delay.

(ii) Profit-Earning Capacity

Assembling a proper claim for contractor loss of profits (often included in a home office overhead claim) is a challenge several reasons. First, it can be difficult for a contractor to demonstrate a lost opportunity to earn a profit, as it is not an “actual” loss in terms of money spent. Second, to preserve proprietary information, contractors are generally unwilling to provide the required insight into their operations or prospective projects to identify a missed opportunity or accurately quantify possible profits. Lastly, loss of profit or business opportunity is often one of the first things that parties contract out of.

For these reasons, it has become common practice to bundle claims for profit with off-site overheads into a fixed mark-up, usually expressed as a percentage, to cover these costs. The mark-up is then applied to actual costs incurred.

In *Schindler, Robinson* remarked on the issue of mark-ups as a factor of overhead and profit:

[An expert] accounts for a 5% markup for ‘WBP Overhead and Profit’ in his calculations, but provides no opinion on why that percentage markup is used or the basis for the markup. However, I accept that WBP’s actual loss for reimbursable costs as I have found them would be greater than the amount actually expended had they been compensable extras. I accordingly accept that some markup for overhead and profit is commercially reasonable in all the circumstances, and find that 5% is an appropriate amount.

[emphasis added]

Similarly, in *Walsh Construction v. Toronto Transit Commission et al (“Walsh”)*, the Ontario Superior Court considered a party’s expectation to make a profit, the quantification of such profit, and the inclusion of profit in a mark-up to various claims.

On the first issue, the Toronto Transit Commission argued that Walsh was not entitled to claim mark-up on its claims, primarily because there is no guarantee of profit in a fixed-price contract. In short, Walsh as the contractor, carried the risk as to whether it would make a profit. The Court rejected this argument in instances where Walsh was not responsible for cost increases to the project. Indeed, the

contract permitted a mark-up on changes and did not expressly exclude a mark-up in relation to compensation for delay.

As it relates to quantification, Walsh provided evidence that it expected to earn a total profit of \$7.9M on its planned direct costs – profit margin of 5.95%. The Court seemed also to accept Walsh’s argument that it was able to negotiate a lower cost with many of its subcontractors and suppliers compared to the prices carried in its bid, which in effect would increase its profit margin by a further 3.94% (or a total of 9.89%).

On the final question as to which claims the mark-up should be applied, the Court agreed with the Toronto Transit Commission, stating that “*whether a profit markup should apply to every head of damage is another matter. Each head of damage has to be looked at on its own.*” Thus, mark-ups are to be considered on a case-by-case basis. For example, some contracts specify labour and equipment rates that may already include a component of profit and overhead. Adding a further mark-up to these rates would result in double compensation.

Conclusion

This article provides a high-level insight of what may be included in a claim for delay damages.

While this article is written primarily from the perspective of contractor and owner delay damages, the principles apply equally to other stakeholders. Other parties in the construction pyramid can apply similar principles while proactively defending a claim for damages or deciding on appropriate mitigation steps.

Ultimately, a delay damages claim will be guided by project specific factors such as the quality and availability of documentation and evidence, jurisdiction applicable to the claim, and the terms of the contract. Forensic scheduling experts, cost consultants, damage experts, and construction lawyers are best placed to identify and support such claims.

In Part 3 of this *Breaking Down the Walls* series, we will demystify the concept of disruption on a construction project and explain where lost productivity claims fall within the larger delay claim matrix.



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