



ROD C. CARTER, CCP, PSP



Rod C. Carter is President of Long International and has over 20 years of experience in construction project controls, contract disputes and resolution, negotiations, mediation/arbitration support, and expert testimony on scheduling, loss of productivity, and quantum issues. He has experience in entitlement, schedule, and damages analyses on over 30 construction disputes ranging in value from US\$100,000 to US\$7 billion, related to oil and gas, oil refinery, LNG, heavy civil, nuclear, environmental, chemical, power, industrial, commercial, and residential construction projects. Mr. Carter is proficient in the use of Primavera P6 and P3 software, and he has extensive experience in assessing the impact to engineering and construction works of RFIs, change orders, and other events. Mr. Carter specializes in loss of productivity, cumulative impact, and quantum calculations, and has had a lead role in assessing damages on more than

a dozen major disputes. In addition, Mr. Carter has developed cost and schedule risk analysis models using Monte Carlo simulations to address the uncertainty of estimates and claims. He has testified in two arbitrations as an expert in construction scheduling and damages, and he has presented expert findings to an international arbitral tribunal. He is an AACE International Certified Cost Professional and Planning & Scheduling Professional.

EDUCATION

B.S., Civil Engineering, University of Colorado at Boulder, 1996, with honors
Emphasis in Structural Engineering and Construction Management

PROFESSIONAL REGISTRATIONS

Certified Cost Professional (No. 29897)
Planning & Scheduling Professional (No. 19895)

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
Association for the Advancement of Cost Engineering International

TECHNICAL EXPERIENCE

Representative technical experience includes:

- Construction claims preparation, defense, and participation in mediation and arbitration hearings.
- Deposition and expert witness testimony.
- CPM schedule analysis including As-Planned/As-Built CPM, As-Planned Impacted, As-Built “But-For,” Windows, and Time-Impact methodologies.
- CPM schedule development and monthly progress reporting.
- Construction damage’s calculations using total cost, modified total cost, A/B estimate, measured mile, inefficiency claims, cumulative impact claims, and time-related damages.
- Cost estimating related to large earthwork and industrial projects, including bid analysis and review.
- Change order preparation, analysis, and review.



- Negotiations of large change orders concerning scope growth, delay, and disruption.
- Identification and systematic evaluation of major engineering and construction problems and their cause/effect relationship on cost and schedule overruns.
- Development of computerized databases for cost and entitlement issues.
- Expert report preparation, deposition review, preparation of deposition questions, client presentations, and coordination and preparation of graphics.

PROJECT EXPERIENCE

Mr. Carter has served as a testifying expert, Project Manager, or analyst on more than thirty disputes ranging in size from \$100,000 to \$7 billion. He has prepared and evaluated claims and assessed the performance of owners, engineers, and contractors on numerous types of projects. Representative projects include the following:

Refinery, Chemical, Oil & Gas, Power Plant, and Industrial Projects

- Damages analyst in a multi-billion-dollar dispute concerning the design and construction of a nuclear power plant in Europe, involving multiple tranches of claims and counterclaims submitted over the course of several years. Lead analyst responsible for evaluating aspects of the contractor's dynamic simulation disruption claim, as well as claims for variations and additional work, time-related costs, subcontractor pass-through claims, delayed and disputed payments, overhead, profit, and interest. Also assisted in preparing the owner's counterclaims, which involved evaluating planned and actual manpower, segregating time-related costs, and allocating and apportioning time-related costs by schedule window.
- On behalf of the owner seeking to recover delay and disruption costs that it paid to an EPC contractor on an LNG plant in Australia, quantified the delay and disruption damages incurred by the subcontractors in the construction of the facility. Identified scope changes and the impact issues that were potentially caused by the EPC contractor that resulted in delay and disruption and increased the subcontractors' man-hours and costs.
- On behalf on a prime contractor, named damages expert in a \$30 million dispute concerning the engineering and construction of a high-grade gold processing facility. Prepared the prime contractor's claim, reviewed and prepared a pass-through claim for the mechanical subcontractor, and evaluated the Owner's counterclaims. Evaluated the accuracy of the contractors' bid estimates and the impact of numerous design and construction changes, as well as other issues. Evaluated and apportioned responsibility for disruption and damages amongst multiple parties. Quantified disruption resulting from cold-weather work, overtime, crowding, shift work, and the cumulative impact of changes. The parties settled prior to court proceedings.
- On behalf of the contractor, lead expert in the evaluation of delay and disruption man-hours and costs caused by the owner's delay in not providing utility facilities necessary for the pre-commissioning, commissioning, and startup of an oil refinery in Peru. The contractor had completed the construction of the refinery's processing units, but could not pre-commission and commission the facilities until the owner provided the required power, steam, water, hydrogen, and other utilities. Prepared expert reports and participated in the negotiation with the owner's expert to seek resolution of the delay and disruption claims.
- On behalf of an owner/operator, prepared an Expert Report evaluating a contractor's \$20 million claim for non-payment, delay and disruption associated with the engineering and construction of 30 miles of natural gas pipeline and five compressor stations and metering facilities in Pennsylvania. Evaluated delays associated with engineering, permitting, right-of-way access, and the construction of gathering lines and compressor stations, and opined on the responsibility for the delays and the resulting cost overruns.



- Schedule and damages analysis related to an EPC contractor's \$138 million delay and disruption claim on a gas plant project in the Kingdom of Saudi Arabia. Developed detailed assessments of change orders and the impact to the schedule. Developed basis for and calculation of the contractor's entitlement to damages, including delay, loss of productivity, cumulative impact, and the disputed value of unresolved change orders. Evaluated the opposing experts' schedule delay and damages analyses and assessment of responsibilities for project management performance problems. Presented expert findings to an arbitral tribunal. The dispute was resolved prior to final arbitration.
- On behalf of the owner, performed an analysis of the quantum aspects of a contractor's \$130 million delay and changed conditions claim involving the relocation of a \$700 million natural gas processing plant project site in Algeria after construction had commenced because of the discovery of unfavorable soil conditions. The owner counterclaimed delay damages because the plant was completed late. Issues involved alleged increased quantities for earthworks and pipelines in the new site location, subcontract labor man-hours and costs, engineering and construction management man-hours and costs, and associated delay, productivity loss, and other costs, and whether the contractor has sufficient documentation to support its claims. The owner alleged bid error by the contractor and inadequate and incorrect quantum calculations to support its claimed costs. Supported the preparation of an expert report and rebuttal expert report, which were submitted in ICC arbitration in Paris, France. The owner received a favorable award.
- Damages analyst on behalf of the property damages insurance carrier on the analysis of costs incurred by the owner to expedite the completion of the reconstruction of part of an oil refinery in Alberta, Canada following a fire. The analysis included an assessment of expediting costs associated with procurement of equipment and materials, overtime costs for working multiple shifts and longer hours, and loss of productivity as a result of a compressed schedule, trade stacking, and overtime. Mr. Carter also analyzed the trade-offs of increased time-related costs that would have been incurred had the work not been expedited compared to the increased costs as a result of a fast track schedule. The results of the various scenarios were evaluated using Monte Carlo calculations to derive a probabilistic determination of the range of costs as a function of the variables involved in the analyses. Mr. Carter's analyses contributed to a successful settlement between the insurance carrier and the owner.
- On behalf of the owner, lead damages analyst responsible for assessing and recalculating a contractor's \$87 million delay and disruption/loss of productivity claim resulting from alleged design changes to a semi-submersible hull and mooring system project that was fabricated in Norway and installed in the Gulf of Mexico. The analysis involved extensive loss of productivity calculations including losses for overtime, shift work, cold-weather work, crowding, dilution of supervision, use of foreign laborers, and the impact of multiple change orders.
- Lead cost analyst responsible for the evaluation of \$2 billion in cost overruns related to the engineering, procurement and construction of an oil sands facility in Alberta, Canada. Mr. Carter assessed cost and man-hour reports, estimate data, trend data, monthly reports, memoranda, and other relevant project documentation to determine the amount and timing of changes to the project scope, which included upstream facilities at the oil sands mine and downstream facilities at the Upgrader refinery.
- Lead damages analyst in defense of a \$24 million claim on the engineering and construction of a cogeneration power plant facility in Alaska. Responsible for assessing the contractor's claim related to delayed engineering and follow-on construction inefficiencies. Prepared an expert report and the presentation of damages findings for mediation.
- Schedule and damages analyst in defense of a \$150 million claim on three EPC turnkey chemical plant projects in Spain, Argentina, and The Netherlands. Prepared an expert report and developed critical path delay analyses for allocation of change order, weather, force majeure, and contractor-caused delays.
- Preparation of claims involving the construction of a \$790 million delayed coker complex in Venezuela, focusing on support of the attorney's brief submitted for ICC Arbitration and the calculation of the contractor's damages claims involving delay, loss of productivity, and disputed extra work.



- On behalf of the owner, performed an analysis of cost overrun claims resulting from mismanagement, delays, and rework by an EPC contractor for an offshore oil and gas production SPAR installed in the Gulf of Mexico. The fabrication of the soft tank/truss was performed in Texas and the fabrication of the hard tank was performed in Finland. Responsible for the development of a welding and craft labor database to establish the extent of rework and labor inefficiencies associated with the fabrication of the SPAR.
- Assisted the owner in analyzing a contractor's claim related to the fabrication of components for a well system in the Gulf of Mexico. Responsible for assessing alleged cost overruns and change orders, and preparing the owner's negotiation package.
- Analysis of a contractor's claim for delay and disruption allegedly resulting from work associated with removal of lead-containing paint from the process plant modules and platforms of an offshore oil production facility installed in the Gulf of Mexico.
- Schedule analyst responsible for assessing engineering, procurement, construction, and start-up delays for a magnesium production facility in the Middle East. Responsible for verifying and statusing the as-built schedule and preparing delay narratives.
- On behalf of the owner, assessed the impact and costs of engineering delays and construction inefficiencies related to a Liquefied Natural Gas project.
- Project Manager responsible for entitlement, schedule, and cost analyses on litigation arising from the termination of a nuclear demolition contractor by the construction manager. Prepared an affirmative claim valued at \$2.3 million and rebutted the contractor's counterclaim valued at \$1.5 million.
- Lead damages analyst on a dispute arising from a steel mill expansion. Responsible for a unit price variance analysis and estimating costs for civil, concrete, mechanical, and electric work.
- Entitlement and damages analyst on an \$11 million dispute arising from the construction of a semiconductor fabrication facility. Prepared issue analyses related to mechanical and piping design changes and performed estimates on mechanical and piping work to analyze cost overruns.
- Entitlement and schedule analyst on a \$60 million dispute arising from a steel mill expansion project. Reviewed and assessed RFIs, drawing changes, and change orders to identify and apportion schedule impacts.

Heavy Civil and Structural Projects

- Damages and scheduling expert for a contractor in a \$1.3 million dispute with its earthwork and utilities subcontractor. Submitted an expert report which asserted \$300,000 in damages and defended a \$1 million counterclaim. Prepared all damages and schedule analyses and provided testimony in both deposition and arbitration. The contractor received a favorable award.
- Preparation of a report, damage analysis, and schedule analysis on behalf of a subcontractor for a \$450,000 change order on the construction of a parking structure with post-tensioned structural concrete. Prepared an As-Built "But-For" schedule analysis and calculated claimed costs.
- Schedule analyst in a \$70 million dispute resulting from the construction of subway tunnels which were delayed by over two years. Responsible for identifying and apportioning delays.
- Damages analyst in rebutting a \$52 million claim from the owner on a large wastewater tunnel. Helped audit and reconcile \$166 million in actual costs versus an after the fact estimate of \$114 million.
- Damages analyst responsible for rebutting an erection contractor's \$1.6 million claim against a steel fabricator. Analysis was used in a rebuttal report and in cross-examination of the opposing expert.



Commercial and Residential Projects

- Lead schedule and damages analyst in preparing a \$1.2 million claim for a contractor that constructed a retail facility and related site work. Responsible for auditing and recoding invoices and timesheets, preparing a cost variance analysis and calculating damages, recreating the as-built schedule, and identifying and apportioning delays.
- Project Manager responsible for preparing a contractor's \$250,000 change request for delay and disruption associated with structural, mechanical, and electrical design changes in the construction of a correctional facility.
- Lead damages analyst responsible for calculating some \$5 million in direct and consequential damages incurred by an owner due to the late and defective construction of a housing development.
- Scheduler responsible for preparing a contractor's baseline schedule and schedule updates for the construction of a \$5 million church and related site work.

PROFESSIONAL EXPERIENCE

Long International, Inc.

Littleton, Colorado (September 2001 to Present)

As President of Long International, Mr. Carter provides cost, schedule, and entitlement analyses on a wide variety of construction disputes. He has prepared document databases in support of attorney briefs and expert reports submitted for ICC arbitration, and has been responsible for the preparation of several analyses quantifying the schedule impact of RFIs, change orders, and other events to engineering and construction works. Mr. Carter specializes in loss of productivity, cumulative impact, and quantum calculations, and has had a lead role in assessing damages on more than a dozen major disputes. He has submitted expert reports and provided expert testimony on both schedule delay and quantum issues.

RCC Construction Services, Inc.

Denver, Colorado (February 2001 to September 2001)

Mr. Carter provided scheduling assistance for ongoing projects, as well as change order preparation and expert testimony related to several projects in dispute.

Kellogg, LLC

Denver, Colorado (July 1997 to February 2001)

As a Senior Consultant, Mr. Carter served as Project Manager and lead analyst on several dispute-related projects. Mr. Carter's responsibilities ranged from initial review and organization of documents to helping write expert reports and participating in mediation, giving him well-rounded experience in the construction claims' process.

Peterson Consulting, LLC/Independent Contractor

Denver, Colorado (January 1997 to July 1997)

As a Staff Consultant and later, independent contractor, Mr. Carter served as a cost and entitlement analyst on several disputes.



S. L. Smith Lumber Company

Leadville, Colorado (Summers of 1988 to 1996)

Mr. Carter's duties included preparing material takeoffs and cost estimates, controlling inventory and pricing, and coordinating deliveries of the materials for housing and commercial projects.

PUBLICATIONS AND SPEAKING ENGAGEMENTS

"Proving the Cause-Effect Linkage," with Richard J. Long, P.E., P.Eng., and Harold E. Buddemeyer, Jr., *Long International, Inc.*, March 2018.

"A Reasonable Method to Estimate Loss of Labor Productivity Due to Overtime," *Long International, Inc.*, August 2017.

"Applications of Monte Carlo Simulations in Dispute Resolution and Claims Work," with Richard J. Long, P.E., *Long International, Inc.*, December 2016.

"Implementing Complex Time Impact Analyses on Oil and Gas Projects," with Ronald J. Rider, MBA, *Cost Engineering* journal, November/December 2015. The paper was presented at the AACE International Annual Meeting in July 2015.

"Construction Claims Analysis Checklist," with Richard J. Long, P.E., *Long International, Inc.*, April 2015.

"Implementing Time Impact Analyses on Large, Complex EPC Projects," with Richard J. Long, P.E., and Ronald J. Rider, MBA, *Long International, Inc.*, July 2014.

"Cumulative Impact and Other Disruption Claims in Construction," with Richard J. Long, P.E., and Harold E. Buddemeyer, Jr., *Virtualbookworm.com Publishing, Inc.*, College Station TX, June 2014.

"Applications of Monte Carlo Simulations in Dispute Resolution and Claims Work," with Richard J. Long, P.E., AACE International Annual Meeting, Seattle, WA, July 2009.

"Cumulative Impact Claims," with Richard J. Long, P.E., Lorman Construction Claims Seminar, Houston, TX, February 2005.