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# CCL Reviewed Alleged Design Errors Aqueduct Filtration Plant Los Angeles, California

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CCL was retained by the Los Angeles Department of Water and Power (DWP) and the Office of the City Attorney to review alleged design errors and omissions in the plans and specifications for the construction of the Los Angeles Aqueduct Filtration Plant (LAAFP). The LAAFP is one of the largest and most advanced filtration plants in the world treating up to 600 million gallons of water per day. The design and construction of this plant along with associated water facilities cost approximately \$146 million.



Brown-Caldwell and Camp, Dresser & McKee formed a joint venture to provide design services to DWP for the LAAFP. M.A. Mortenson (MAM) was the general contractor for the project. MAM and their subcontractors alleged several million dollars of additional costs were incurred due to delays and additional work caused by errors and omissions in the design documents. During construction, MAM submitted 1,908 change estimates for additional compensation of which DWP identified 490 as potentially resulting from design errors and omissions.

CCL reviewed and analyzed 244 of the 490 change estimates identified by DWP as potential design problems. CCL evaluated each change estimate and categorized it as an error, omission, conflict or not a design problem. The 244 change estimates reviewed represented all DWP identified change estimates above \$1,500 and comprised 94 percent of change estimate costs identified by DWP as being due to design problems. Change estimates included architectural, electrical distribution and control, mechanical process and HVAC, and structural issues.

In addition to the technical entitlement review, CCL also analyzed the additional costs and damages incurred by DWP as a result of design errors and omissions. This process involved analyzing MAM and its subcontractor's bids, detailed estimates submitted with change estimates, and the development of cost estimates based on available contractor, designer and owner records. The end result involved the determination of additional costs incurred by DWP as a result of errors and omissions over and above what the work would have cost DWP at bid time had those errors and omissions not existed. The lawsuit was settled between DWP, BC-CDM and MAM prior to trial.



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