

Exponent®
Engineering & Scientific Consulting

Susan Bomba, P.E., PMP, CCM

Principal Engineer | Construction Consulting
Oakland
+1-510-268-5069 | sbomba@exponent.com

Professional Profile

Susan Bomba, P.E., PMP, CCM, is a principal engineer in the Construction Consulting practice at Exponent with more than 25 years of experience in construction program management and advisory. She specializes in PMO development and capital program management for major infrastructure, electric, and gas utility project portfolios and has advised clients on a range of construction topics including project management, project controls, risk management, dispute resolution, and schedule delay analysis.

Ms. Bomba has extensive experience leading multidisciplinary teams, developing efficient project delivery organizations, and implementing data-driven approaches to drive effective construction project management, executive reporting, and portfolio performance management. She advises owners, utilities, and project organizations on capital project execution, project controls, cost, schedule, and risk management, as well as process development. Her experience spans all phases of construction projects from early planning and development to closeout and operations.

Construction Project and Program Advisory

Ms. Bomba has developed and implemented project management systems, data analytics programs, executive reporting frameworks, scheduling systems, and cost control processes. She has established project-, program-, and portfolio-level key performance indicators (KPIs) to support progress measurement, resource planning, risk identification, performance management, and strategic decision-making.

Delay Claims Analysis, Cost Estimating, and Dispute Support

Ms. Bomba has experience supporting clients in construction claims and dispute resolution matters involving project execution, project controls, and schedule performance. Leveraging her background in infrastructure and capital programs, she assists in the evaluation of project records, schedules, and management practices to help clients understand project outcomes, assess schedule impacts, and address project-related disputes.

Academic Credentials & Professional Honors

B.S., Civil Engineering, Rensselaer Polytechnic Institute, 2001

Licenses and Certifications

Professional Engineer Civil, California, #76255

© 2026 Exponent, Inc. All Rights Reserved

Professional Engineer, Michigan, #6201053735

Certified Construction Manager (CCM)

NYU|Stern - Corporate Sustainability Executive Certificate Program

Project Management Professional (PMP)

Prior Experience

Project Manager, Senior Design Engineer, CH2M HILL, 2004–2013

Design Engineer, Earth Tech, 2001–2004

Construction Engineer, Washington Group International, 2001

Professional Affiliations

American Society of Civil Engineers

AACE International

Construction Management Association of America

Project Management Institute

Publications

Ayers A, Bomba S. Once upon a project: using data to tell the story (TCMA-3651). AACE International Conference and Expo, Virtual, 2021.

Bomba S, Ayers A, El Didi L. Adapting data management structures to improve performance in post-disaster scenarios (TCMA-3462). AACE International Conference and Expo, Virtual, 2020.

Bomba S, El Didi L, Ayers A. Data analytics to drive reporting and insights for timely decisions and improved business performance (TCMA-3054). AACE International Conference and Expo, New Orleans, LA, 2019.

Bomba S, El Didi L. Benchmarking and predictive analytics to improve estimates, forecasts, and performance measurement (EST-2881). AACE International Conference and Expo, San Diego, CA, 2018.

Presentations

Bomba S, Erkal E, Hua K. Corporate Sustainability in Construction, CMAA2023, Washington, DC, 2023.

Bomba S. Creating Project History, Women in Construction World Series, Virtual, 2020.

Bomba S, El Didi L, Athanasopoulou, K. Data analytics to drive reporting insights for timely decisions and improved business performance, AACE Western Winter Workshop, South Lake Tahoe, CA, 2019.

Bomba S, El Didi L, Otieno L. Tackling change implementation with a collaborative approach. CMAA National Conference and Trade Show, Las Vegas, NV, 2018

Bomba S, Hsu R. Lessons learned from submarine cable construction in the San Francisco Bay. CMAA National Conference and Trade Show, Washington, DC, 2017

Project Experience

Utilities

- Provided advisory services for a large utility company on appropriate metrics to track its construction project delivery. Analyzed construction project schedules by reviewing historical durations of key activities to determine appropriate forecast durations. Identified multiple areas where projects were under-forecasted based on past performance, contributing to overly optimistic delivery timeframes for future projects.
- Developed processes and standardized procedures for the transmission integrity management program of a large utility. The program expanded their engineering assessments for pipeline integrity and materials verification determination from station piping to in-service transmission lines by identifying opportunistic excavations related to other workstreams. By adding opportunistic excavations, the utility was able to significantly increase the number of features validated each year.
- Planned, scoped, and executed a large asset replacement program for an electric transmission provider, including coordinating with the asset owners to determine priority and funding requirements. Managed overall program budget and adjusted program execution and project priority to align with annual funding changes as well as incorporating accelerated replacements due to ongoing maintenance inspections. Total portfolio value exceeded $2.0B with a target annual spend of $150M.
- Planned and executed multiple programs of electric transmission projects, including system upgrades, relocations, and interconnections with a total portfolio value of $475M. Developed quality control system across the programs to clearly show performance against key project management metrics. Developed reporting framework that included executive-level briefings, portfolio-level financial views, individual project dashboards, and targeted customer contract status updates.
- Collaborated with a software vendor to assist a utility client with system implementation of a PM software solution for a tower maintenance program. Acted as a liaison to translate the PM organization’s needs and requirements to the software vendor. Developed online forms for field reports, daily logs, and quality checklists, workflows to process and perform quality reviews of the forms, and process steps to disseminate the collected information, leading to a system that was a single source of truth for the program.
- Assessed the reporting framework for an electric transmission maintenance program to determine gaps and improve communication across all levels of the client organization. Improved upon existing reports by considering stakeholder communication priorities as well as making the reports automated and efficient to prepare on a regular basis.
- Performed gap analysis on a program management office organizational and governance structure for an electric transmission maintenance program. Recommended an organization structure that met the strategic and execution goals of the program while improving efficiency across the functional groups.
- Performed constructability reviews and project risk reviews evaluating the schedule, cost, and potential risks for a large portfolio of capital improvement construction projects for a large utility client. The project sizes ranged from $20M to $380M, consisting of new lines and reconductoring existing lines. Performed work to support the portfolio management group, providing insight into the feasibility and health of the portfolio.

- Developed and managed a program to conduct direct assessments of in-service gas pipelines. Combined assessment work from five different client organizations with resource and schedule coordination for optimized work execution.
- Developed and managed a region-wide program of hydrostatic testing projects for in-service gas pipelines, from scoping phase through construction and closeout. Projects were completed on an accelerated schedule as part of an overall pipeline safety program. The new Project Management Office (PMO) aligned multiple gas pipeline workstreams (strength testing, pipeline replacement, valve automation, and in-line inspections) under consistent schedule templates, cost management tools, and project management processes.

Heavy Civil and Infrastructure

- Developed and implemented enhanced project controls for an environmental remediation department of a large corporation for its construction portfolio. Improved cost and schedule controls to better align with industry best practices and corporate governance requirements.
- Provided advisory services to an innovative transportation provider to assist with regulatory reviews of their vehicle system as well as risk assessments and prioritization for early planning phases of implementation of their system across multiple geographic areas.
- Analyzed contractor’s claim for delay on a stormwater system installation project. Reviewed project documentation including schedule updates, daily logs, and plan sets to understand the drivers for the delays that occurred.
- Reviewed cost estimates and advised the client for a bridge construction project after failure of existing bridge required immediate replacement.
- Managed a design project as the lead bridge engineer for the preliminary engineering phase of a 6.7-mile freeway widening project including the redesign of two major system interchanges. Prepared final design reports for the interchange and local overpass bridges along the length of the project, evaluating various conventional and innovative structure types.
- Performed structural design services and construction support for the widening of a multi-span curved steel-beam viaduct in an urban environment as part of a major system interchange redesign project.
- Performed preliminary roadway design services for a reconstruction of a historic bascule bridge crossing including reconfiguration of bridge approaches and intersections. Provided engineering support during construction.
- Performed structural design services for various county highway bridges in New York State. Responsible for design and construction support for single-span steel girder and concrete box beam bridges.
- Performed structural design services for a multi-span bridge replacement in Sri Lanka following the 2004 Indian Ocean earthquake and tsunami.
- Provided field engineering services for bridges constructed on a new 47-mile-long controlled-access toll road in a major metropolitan area.

Commercial

- Developed standard operating procedures and project management standards for a luxury home builder. Reviewed existing job aids and met with the operations manager to build a cohesive plan using industry best practices that would allow the company to scale as the business grew.

- Analyzed owner’s claim for schedule delay on behalf of a mechanical subcontractor on a senior living facility. Reviewed project documentation including schedule updates, daily logs, and OAC meeting minutes to determine what impact the mechanical subcontractor had in the overall delay claim by the owner.
- Analyzed owner’s claim for schedule delay on behalf of the general contractor for a storefront renovation. Reviewed project documents including plan set changes, schedules, and contract documents to determine whether the owner’s claim for delays had merit.
- Reviewed costs for repair work and extent of repairs for a client after a large equipment failure damaged a portion of its building.
- Developed a project management manual to standardize processes for a portfolio of commercial projects for a solar energy provider. Combined three individual process documents into a cohesive plan for the full solar development and installation lifecycle.
- Performed 3D modeling and drafting using Revit, AutoCAD, and Microstation for various building rehabilitation projects.