This page intentionally redacted due to unrequested information submitted and was not forwarded to the evaluation panel.

1.1.1 – INTRODUCTORY COVER LETTER

August 16, 2023

Multnomah County Purchasing
501 SE Hawthorne Blvd., Ste 320
Portland, OR 97214

Re: Earthquake Ready Burnside Bridge CM/GC Services
RFP-20-2023

Dear Ms. Godat and Members of the Evaluation Committee:

Burnside Bridge Partners (BBP), a joint venture of Stacy and Witbeck, Inc. (Stacy and Witbeck), Traylor Bros., Inc. (Traylor), and American Bridge Company (AB), is a thoughtfully formed team that is prepared and eager to join Multnomah County (the Agency) and the A&E on the Project Team for the Earthquake Ready Burnside Bridge Project (the Project). Our fully-integrated joint venture represents the nation's premier bridge builders and the industry's leading CM/GC contractor with local relationships and understanding, technical expertise, and a track record of delivering on commitments made and achievement of Project goals.

BBP is led by managing joint venture partner Stacy and Witbeck. Since 1994, Stacy and Witbeck has managed CM/GC projects for major infrastructure improvement projects in Multnomah County. In the years since, Stacy and Witbeck has developed and refined excellent project management tools for CM/GC delivery on more than $7.9 billion in CM/GC projects and created deep relationships with stakeholders, including the City of Portland (CoP) and its bureaus such as Parks and Recreation (PP&R) and Bureau of Transportation (PBoT), Union Pacific Railroad (UPRR), Oregon Department of Transportation (ODOT), and the local COBID-certified subcontracting community.

For more than 77 years, Traylor has provided single-source, cutting-edge construction to public agencies throughout North America. Traylor has completed more than 135 complex technical bridge projects totaling more than $8 billion, including landmark cable-stay, movable, and segmental bridges. Traylor's comprehensive understanding and proven ability with all bridge types being considered for the Project will be a major benefit to the Agency and stakeholders.

AB was founded in 1900 and since then the company has built some of the world's most complex steel erection projects and recognizable bridges, including many movable bridges. AB has engineered, fabricated, and constructed some of the region's most historically significant bridges, including the fabrication of the original Burnside Bridge. AB's technical bridge building experience, including alternative delivery projects and movable bridges throughout the nation, will be leveraged to support a successful project delivery.

The Project is an impactful and significant undertaking to continue to improve the region's infrastructure. We recognize the importance of this project on our community and the care, effort, and investment the Agency, the CoP, and stakeholders have expended thus far in the process. We are confident in our team's ability to partner with the Agency in the coming phases of the Project and that we will become an effective member of the Project Team by applying our proven Project-First approach. This is a cornerstone of our team's approach on every project and it means that we will set aside company and entity allegiance in order to make decisions that are in the best interest of the Project. This approach requires trust, transparency, alignment of expectations, and respect amongst the team members, which we look forward to demonstrating to the Agency. The team responsible for carrying out this approach is described on the next page.

Stacy and Witbeck's experience includes the **Portland-Milwaukie East and West Segments**, the current MAX Red Line Project, the entirety of Portland's Streetcar system, including modifications to the Broadway Bridge, the iconic Sixth Street Viaduct in Los Angeles, and the industry celebrated Mid-Coast Corridor Project in San Diego.

Traylor and AB partnered on the $3.5 billion **Tappan Zee Bridge** in New York. Traylor's experience also includes the Huey P. Long Bridge in Louisiana and 17th Street Causeway Bascule Bridge in Florida.

AB is the nation's premier movable bridge builder, with a recent resume of projects including the **Woodrow Wilson Bascule Bridge Replacement** in Washington, D.C., and Third Street Bascule Bridge in San Francisco, as well long span bridges such as the Queensferry Crossing in Edinburgh Scotland and San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span.

Project Principal/Lead Jim Abramson brings 35 years of experience, including 20 years in Project Executive roles on alternative delivery projects to the team. A longtime Portland Metro area resident, Jim's local relationships will be a benefit to the team.

Project Manager Steve Wood will leverage his 23 years of experience on alternative delivery projects, including six recent CM/GC heavy civil infrastructure projects in Portland and Seattle, to organize Project team members around achieving Agency objectives.

Dan Raynor, PE, SE will serve as **Construction Manager/Superintendent – Long Span** as well as **Project-Wide Construction Manager**. A longtime Portland resident, Dan is eager to apply his 34 years of bridge building experience, including major leadership roles on $5.2 billion in alternative delivery projects, to this local project.

Construction Manager/Superintendent – Movable Bridge Jene Van Zant has 22 years of experience in bridge building and recently led the team in the successful delivery of the Third Street Bridge in San Francisco. His movable bridge experience, coupled with local experiences in major roles on the Tilikum Crossing make him ideal for this role.

John Schober, PE will bring his 43 years of experience building movable bridges to the role of **Movable Bridge Coordinator**. Simply put, John is among the finest bascule bridge builders in the nation, with experience on more than 15 movable bridges. He will leverage these lessons learned and relationships with specialty subconsultants, fabricators, and equipment suppliers to proactively mitigate risks associated with the bascule bridge.

Faye Burch, of FM Burch Assoc. Inc., has joined our team as **Diversity Administrator**. Faye brings 29 years of community activism, DBE outreach and support, and workforce development leadership to our team. This includes 20 years of experience working with Stacy and Witbeck on CM/GC projects in Portland, as well as experience administering programs with FHWA requirements. Faye's accomplishments also include receiving the Gladys McCoy Lifetime Achievement Award from the Agency in 2019.

Lead Cost Estimator John Boknecht, PE, a Portland Metro resident, has 24 years of estimating and management experience on heavy civil CM/GC projects. John has led large teams in developing iterative estimates on movable and long span bridges and complex CM/GC projects, totaling more than $1.2 billion in GMPs reached in the last five years alone.

These individuals are supported by four additional Key Personnel **Pre-Construction Manager/Deputy Project Manager Jennifer DeLong, Demolition/Early Works Manager Darren Lueking, General Superintendent Steve Carpenter, and Deputy Construction Manager – Long Span Jared Carlson, PE.** The benefits of these individual and their role in reducing Project risk is detailed throughout our response. We have also named individuals throughout our organizational chart who will fill important positions on the Project who have been carefully selected for their experience, transparent, and collaborative attitudes, and commitment to partnering with the Agency in the achievement of the Project objectives.

For more than nine months, these individuals have been working with each other and meeting with local stakeholders to understand the Project, shape our approach, and develop strategies that will maximize our value and impact as a member of the Project Team. Each and every member of our team has an understanding of the Agency's high expectations for responsiveness and collaboration, the importance of this project in our community, and the impact this once in a generation project will have on the stakeholders, COBID-certified community, and local workforce.

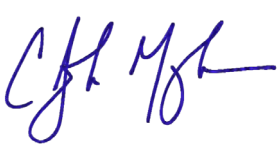
Steve Wood will be the single point of contact for our team and he may be reached by phone at 503-572-5465, swood@stacywitbeck.com, and 6979 SE Lake Road, Portland, OR 97267.

In conclusion, we appreciate the Agency's consideration of this response and look forward to the opportunity to join the Project Team on this landmark project in Portland. Frankly, we can't wait to get started!

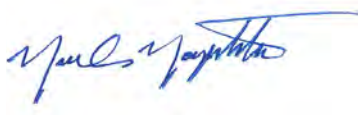
Sincerely,

Burnside Bridge Partners

Jim Abramson, Project Principal
Chief Operating Officer,
Stacy and Witbeck, Inc.



C. John Meagher, Project Sponsor
Vice President/Division Manager,
Traylor Bros., Inc.



Neil Napolitano, Project Sponsor
Vice President, Operations,
American Bridge Company

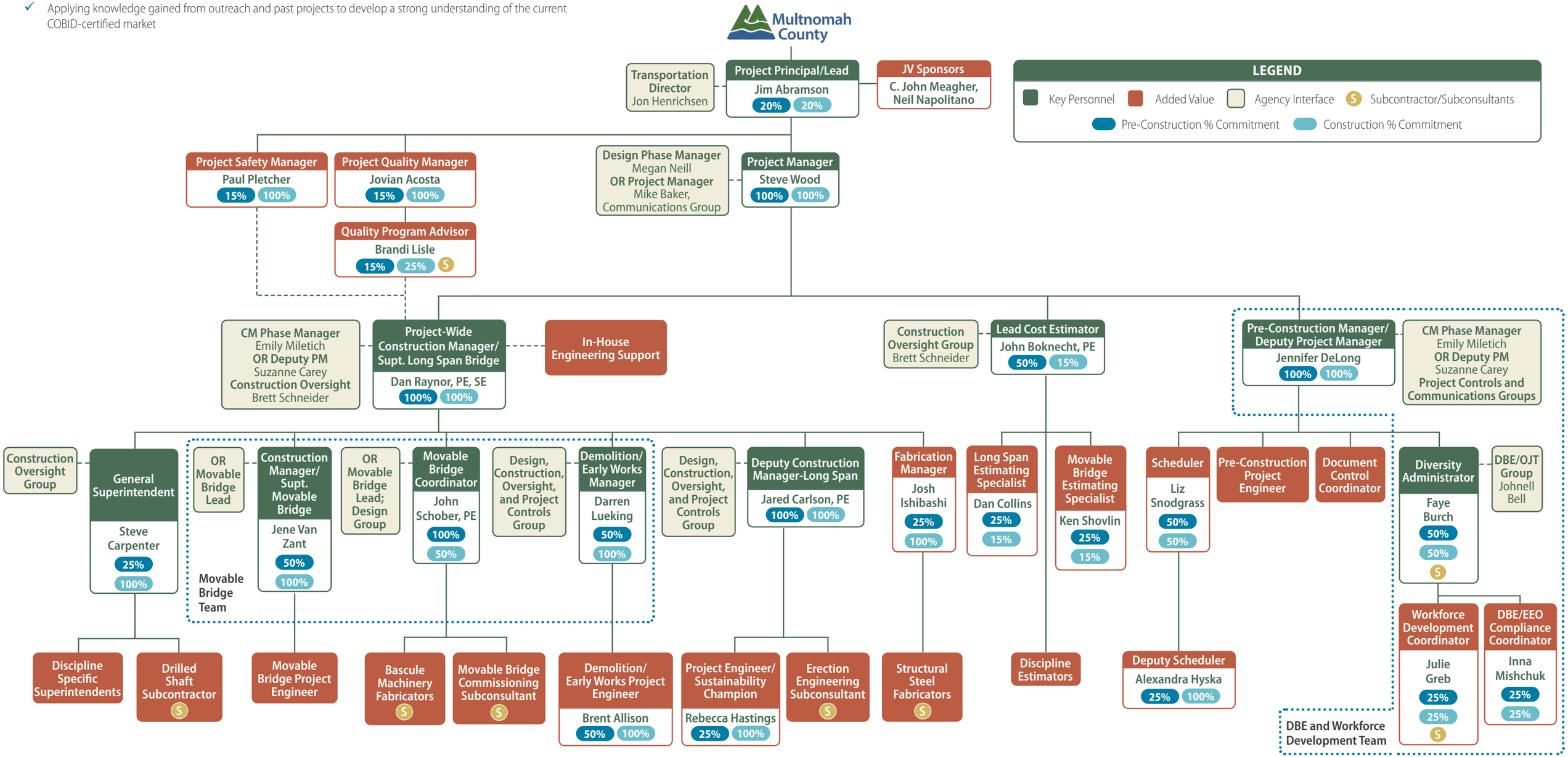
1.1.2 ORGANIZATIONAL CHART

We have hand-selected each member of the team presented in this organization chart. They represent the nation's finest technical experts, most innovative builders, motivated community organizers, and CM/GC collaborators. They have been working together over the last nine months to meet with stakeholders, engage suppliers, investigate the site, and begin to develop the construction approaches presented in this response. This team has focused on developing approaches to meet, if not exceed all Agency objectives. The benefits they bring to the Project include the following experiences:

- ✓ Engaging with stakeholders to understand constraints, concerns, and hot-buttons to proactively identify mitigations
- ✓ Working with internal and external resources to understand and plan for Union Pacific (UPRR) coordination, in-water work, and activities impacting the CoP Parks and Recreation facilities
- ✓ Collaborating to develop a preliminary CPM schedule and preparatory check estimates
- ✓ Performing preliminary evaluations of the long span options to form a solid recommendation for the Agency
- ✓ Applying knowledge gained from outreach and past projects to develop a strong understanding of the current COBID-certified market

A few key decisions have been made by our team to achieve the Agency's objectives and reduce risk. These include:

- ✓ Elevating Dan Raynor to the position of Project-Wide Construction Manager to seamlessly integrate all segments of the Project
- ✓ Leveraging Jene Van Zant, John Schober, and Darren Lueking's movable bridge experience to create a strong, experienced Movable Bridge Team. They have been engaged with specialty subconsultants for engineering, manufacturing, and commissioning support who are committed to joining the team upon NTP
- ✓ Supplementing Faye Burch's team with Inna Mishchuk as DBE/EEO Compliance Coordinator and Julie Greb as Workforce Development Coordinator with oversight from Jennifer DeLong to create an effective, well-connected, and innovative team
- ✓ Committing Ken Shovlin and Dan Collins, well-experienced builders and estimators with AB and Traylor, to support John Boknecht with specialty bridge estimating services
- ✓ Naming Josh Ishibashi as Fabrication Manager to focus on identifying and eliminating potential issues in the fabrication of Project elements



1.1.3 RESUMES

JIM ABRAMSON | PROJECT PRINCIPAL/LEAD

14 YEARS WITH STACY AND WITBECK | **35 YEARS IN THE INDUSTRY**

RESPONSIBILITY ON THE PROJECT

Jim will be responsible for ensuring the Project has all resources necessary to safely and efficiently perform the work and achieve the Agency's goals. During pre-construction, he will provide executive-level oversight of the schedule and budget development, support partnering efforts, monitor DBE participation and workforce development metrics, and oversee quality and safety activities. Jim will work with the Agency's team, the JV Sponsors, and Steve W. to present and negotiate the GMP collaboratively to achieve a mutually agreeable price that appropriately allocates risk. In the construction phase, Jim will continue to partner with the Agency, ensure the team is well-equipped to address project issues, and provide guidance so that all Project commitments are met.

EDUCATION

B.S., Construction Engineering Management, Oregon State University – Corvallis, OR

CERTIFICATIONS AND TRAININGS

- AGC Advanced Management
- Crisis Management Harassment Prevention Hazard Communication – GHS
- OSHA Crane & Derricks Regulation
- Roadway Worker Protection (Railroad)

WORK HISTORY

Jim has 35 years of experience in the construction industry with progressive roles managing public infrastructure, heavy civil CM/GC projects. He is an Executive Vice President and the Chief Operating Officer for Stacy and Witbeck. A longtime Portland Metro resident, Jim has served as project manager on numerous public infrastructure improvement projects in the area and has represented Stacy and Witbeck at the executive level in roles such as Principal in Charge, Project Sponsor, and Project Executive. He is highly adept at managing complicated heavy civil projects in complex, difficult conditions, and his real strength lies in guiding CM/GC teams during the pre-construction phase in order to reach GMPs. Jim's ability to help project teams foster strong working relationships with clients, stakeholders, and designers has resulted in successful projects that achieve owner goals for budget, schedule, and community acceptance. Furthermore, Jim has a depth of experience building teams with an emphasis on disadvantaged and small business participation, especially in Portland.

RELEVANT EXPERIENCE

MAX Red Line Extension and Reliability Improvements Project, TriMet – Portland, OR
Principal-in-Charge | January 2020 to Present

This is a $143 million CM/GC project for the construction of three major improvements to TriMet's existing Red Line. The project requires extensive coordination with TriMet, ODOT, and UPRR in order to minimize impacts to their operations and safely perform the work. **ODOT and UPRR coordination was especially important for construction of bridges** over their infrastructure. Recognizing that the project was dependent upon UPRR's work windows and approvals for activities adjacent to and over the mainline, Jim's team developed an innovative solution to minimize stand-down time and required flagging. Over the course of several weeks, the team monitored and tracked freight traffic through the corridor to identify naturally occurring windows without train traffic. The team then **presented this information to UPRR in order to demonstrate that certain longer-duration activities could safely occur in these naturally occurring windows without the risk of interfering with railroad operations or requiring specific outage approvals.** UPRR agreed and this has greatly improved the project's efficiency. Jim was responsible for supporting the team during estimate development and GMP negotiation, as well as participating in executive level updates and partnering meetings. Jim now provides corporate support to the project, which is well into construction, specifically related to **safety, quality, and DBE participation goals.**

Lynnwood Link Extension (L200), Sound Transit – Seattle, WA
Project Sponsor | June 2016 to Present

This is an $884 million GC/CM (similar to CM/GC) contract for a 4.9-mile extension of Sound Transit's light rail system. The project includes approximately 1.9 miles of elevated guideway and approximately three miles of at-grade guideway in retained cuts/fills. Other work includes demolition, clearing and grubbing, utility relocations, trackwork, retaining walls, sound walls, site work, parking garages, road work, site improvements around stations, stormwater retention facilities, and restoration. This project experienced significant budget challenges prior to GMP when estimates came in over the client's engineers' estimate. The team performed additional value engineering and developed solutions to keep the project progressing. **Jim helped the team maintain a project-first approach, focus on the ultimate goal of a fair, agreeable GMP, and set the project up for success in construction.** The project is nearing completion and is highly regarded as a success by the client and stakeholders in large part due to Jim's hands-on leadership.

Mid-Coast Corridor Projects, SANDAG – San Diego, CA
Project Executive | January 2016 to November 2021

This was a $1.5 billion CM/GC project to extend the existing light rail system 11 miles north from the Old Town station to the University of California's San Diego Campus. Work included track, nine stations, 10 bridges, retaining walls, utilities, roadwork, a major bike path, sports fields, lighting, and systems related to the light rail. Seven miles of the project is within the LOSSAN Rail Corridor, the second busiest corridor in the nation. All work was coordinated

with BNSF, Amtrak, and local rail authorities for safe passage of trains during construction. Jim provided corporate oversight and accountability to both SANDAG and Stacy and Witbeck's joint venture partners to ensure that performance met all project goals. The Mid-Coast Corridor Project was SANDAG's first CM/GC contract and has been highly celebrated in the industry, including receiving the AGC of America Grand Award. **Jim's ability to advise the team on technical concepts and maintain trusting, collaborative relationships with the owner was a major element of the team's success.**

Luuwit View Park, City of Portland – Portland, OR
Principal-in-Charge | July 2016 to October 2017
This $8.7 million CM/GC project was for construction of a new multi-faceted park for Portland Parks & Recreation. The team converted a 16-acre undeveloped site surrounded by a working farm, single-family residences, and Shaver Elementary School in the Argay neighborhood of Portland into this highly visible community space. The project incorporated a host of different site elements and posed construction sequencing challenges. **Jim was instrumental in crafting a relationship with a local DBE firm to help develop their skills in CM/GC contracting. We included their employees in the pre-construction phase to expose them to the complexities of collaborative design advancement, iterative estimating, and GMP negotiations.** Jim provided executive level leadership for this project to ensure that all project goals were met.

Light Rail Track Rehabilitation Project, TriMet – Portland, OR
Principal in Charge | November 2013 to November 2018
This was a five-year contract to provide CM/GC services on a task order basis for rail and crossing rehabilitation at multiple locations on TriMet's light rail system. Each location included pre-construction and construction services, beginning with 30 percent design drawings, to provide TriMet and the design team with constructability comments and value engineering opportunities. During this phase, the team also performed construction staging and access planning, cost estimating, budget control, and scheduling and schedule control. Construction services included replacement or rehabilitation of turnouts, crossing diamonds, road crossing panels, and crossovers. **Jim provided corporate oversight and accountability. He took an active role in the project to ensure that performance met all project goals.**

Portland-Milwaukie Light Rail Projects-East Segment, TriMet –Portland, OR
Project Manager | June 2011 to April 2016
This was a $300 million CM/GC project for construction of approximately seven miles of guideway through neighborhoods, downtown areas, and adjacent to an active UPRR line. The project included trackwork, stations, retaining walls, bridges, multiple street crossings, utilities, street lighting, and street reconstruction. The project also included construction of the Trolley Trail, installation of significant public art, and work within Kellogg Creek. Jim was responsible for leading the team in both pre-construction and construction. **Jim managed pre-construction activities, including performing constructability reviews, identifying cost and schedule savings opportunities, and developing the GMP.** During construction, he managed the overall project to ensure the team met schedule, budget, and DBE commitments while maintaining project safety and quality standards as priorities.

Portland-Milwaukie Light Rail Projects-West Segment, TriMet – Portland, OR
Principal-in-Charge | September 2011 to May 2014
This was an $88 million CM/GC project for construction of one mile of guideway, over half of which is on a complex 12-span bridge structure through downtown Portland. The project included in-street construction, dedicated right-of-way, and work in high impact traffic areas. The project included unique eco-track consisting of grass plantings between the light rail tracks, as well as other sustainable features such as green roofs on auxiliary buildings. The work also included utilities, street reconstruction, stations, OCS foundations, and systems ductbanks. Jim provided corporate oversight and accountability to ensure the team's performance met all project goals.

Portland Streetcar Loop, City of Portland – Portland, OR
Project Sponsor | July 2009 to September 2010
Jim provided oversight for this $109 million CM/GC project which extended the existing CoP streetcar system by approximately six miles. The project ties-in to an existing streetcar alignment, crosses the Broadway Bridge and two interstate highways, and continues along busy thoroughfares. Features of this project included extensive structural modifications to the nearly 100-year-old Portland landmark bascule Broadway Bridge over the Willamette River. This required extensive coordination with the U.S. Coast Guard to schedule shipping traffic. All work was completed safely, on time, and without disruption to river traffic. **The project met or bettered every schedule milestone and critical work zone completion date.**

I-205 Light Rail Extension, TriMet – Portland, OR
Project Sponsor | January 2007 to June 2010
This $181 million design-build contract for construction of 6.5 miles of light rail adjacent to the I-205 freeway included construction of track, relocation of existing and construction of new utilities, construction of nine light rail bridges, three cut and cover box tunnels, eight stations, four park and rides, and a robust public art program. The project involved significant traffic control planning for work adjacent to the active I-205 freeway. Jim provided oversight during project completion and closeout on this Stacy and Witbeck-managed joint venture project. This included a strong emphasis on the team's commitments to public relations, apprentice training, and DBE involvement. The project involved extensive coordination with ODOT and local City and County agencies and stakeholders. The project was completed on schedule, within budget, and exceeded TriMet's DBE participation goals.

Portland Transit Mall, TriMet – Portland, OR
Construction Manager | May 2006 to October 2008
This was a $158 million CM/GC light rail project for 3.5 miles of single track in the downtown Portland business core. Scope included utility relocations and coordination, civil construction, embedded track construction, four streetcar crossings, **modifications to an existing 100-year-old UPRR bridge structure,** all systems, OCS and signaling work, ductbanks, and 12 station platforms. Jim worked with the team during pre-construction to establish the project budget and perform value engineering, constructability, and design review activities. He interfaced closely with UPRR to plan the work on the Steel Bridge. The project achieved all client goals.

STEVE WOOD | PROJECT MANAGER

17 YEARS WITH STACY AND WITBECK

35 YEARS IN THE INDUSTRY

RESPONSIBILITY ON THE PROJECT

As Project Manager, Steve will be responsible for leading the team and setting the tone for collaboration, innovation, trust, and transparent communication. Steve will oversee all project operations, facilitate partnership between our team, the Agency, the A&E, and stakeholders, and ensure the team remains focused on the overarching Agency objectives. Steve will support the team's DBE outreach and mentoring, as well as workforce development activities by leveraging his existing relationships in the subcontracting and workforce development communities to solicit meaningful feedback on our programs and approaches. During construction, Steve will work with the team members to balance construction efficiency with minimized impacts to stakeholders.

EDUCATION

B.S., Civil Engineering, California State University – Fresno, CA

CERTIFICATIONS AND TRAININGS

- Inactive PE, WI
- OSHA 10-Hour
- Former Employer Representative, International Union of Operating Engineers Local #701 Joint Apprentice and Training Council
- Former State of Oregon Department of Consumer and Business Services Building Codes Division – Building Codes Structures Board Member (appointed by Governor)

WORK HISTORY

Steve has over 35 years of varied experience in the construction of heavy civil construction projects, including bridges, in-street light rail and streetcar projects, tunnels, underground structures, mechanical-industrial facilities, concrete structures, highways, pump stations, commercial buildings, site utilities, pipelines, and an airbase. These experiences give him comprehensive experience in all aspects of construction, including project management, engineering, field supervision, safety, quality, cost and scheduling, and estimating. Steve is very knowledgeable in all aspects of heavy civil construction. Steve is a recognized consensus builder who is able to make and maintain relationships among project teams that foster innovation, collaboration, and a focus on project-first outcomes. An advocate for diversity in construction, both COBID-certified firms and among the workforce, Steve is able to manage both the demands of technically complex, schedule critical projects with client and community expectations. Steve has successfully led six CM/GC and GC/CM projects, all of which were successful in not only meeting schedule and budget goals, but also increasing DBE subcontractor capacity, growing workforce capabilities, and realizing client commitments to the community.

RELEVANT EXPERIENCE

Lynnwood Link Extension (L200), Sound Transit – Seattle, WA
Project Manager | August 2016 to April 2020

This is an $884 million GC/CM (similar to CM/GC) contract for a 4.9-mile extension of Sound Transit's light rail system. The project includes approximately 1.9 miles of elevated guideway and approximately three miles of at-grade guideway in retained cuts/fills. Other work includes demolition, clearing and grubbing, utility relocations, trackwork, retaining walls, sound walls, site work, parking garages, road work, site improvements around stations, storm water retention facilities, and restoration. Steve led the team in the pre-construction phase developing project management plans, performing constructability reviews, establishing the project budget, and refining the project schedule. This project was over Sound Transit's budget going into the GMP negotiations. **Steve worked with the project team to facilitate a series of workshops, including additional VE workshops. As a result, the team presented $27.5 million in savings** through 25 concepts, including a concept to change the bridge columns to a standard design in order to reuse formwork. Sound Transit's ICE performed a comparative analysis, and Steve and the team jointly incorporated more than $27.9 million in savings. Throughout this process, Steve also managed early work construction packages as subsequent scopes were negotiated. Steve was also responsible for the development and early implementation of the Project's DBE outreach program and workforce development goals. The project, which is set to be completed this year, will exceed all set goals. **This project also includes a comprehensive PLA. Steve was an active participant in Union leadership meetings and facilitated harmonious relations on the project.**

University Link Systems Transit Project (U830), Sound Transit - Seattle, WA
Project Manager | December 2011 to April 2016

This was a $119 million GC/CM project for construction of 3.15 miles of double track light rail through two bored tunnels and two cut and cover stations, including signals, systems, traction power, OCS, and communications systems. Steve led the pre-construction and construction efforts including the budget and estimating process and oversight of the coordination of construction sequencing/scheduling, constructability reviews, and procurements. He coordinated with Sound Transit's Project Manager, senior level staff, designers, and adjacent contractors. During construction, he was responsible for overall project performance. Construction in this tunnel environment required carefully planned and coordinated access and work plans. Steve met regularly with the other contractors working within the tunnel and eventually **his ability to coordinate became so apparent to the client that Steve and the team were asked to facilitate the Coordinated Installation Plan (CIP) for the interfacing contracts, including an interfacing contract with Traylor.** Under Steve's leadership, the project was delivered on-time and within budget, all while exceeding DBE participation goals. The project required

highly specialized subcontractors and therefore a low DBE participation goal was set by the owner (2%). Steve worked diligently to maximize participation and ended with more than 6% DBE participation. Steve was also **instrumental in administration of the project's PLA** and authored agreements between local labor Unions that are still in place. **The team was awarded the 2015 Champion of Inclusion Award by Sound Transit in recognition of these efforts.**

Portland Streetcar Loop, City of Portland – Portland, OR
Project Manager | March 2009 to December 2011
This was a $109 million CM/GC project for a six-mile extension to Portland's streetcar system. The project included complex modifications to the existing streetcar system, tie-ins to streetcar and light rail tracks (including work around live OCS), extensive structural modifications to the nearly 100-year-old **landmark bascule-style Broadway Bridge, a bridge over an active UPRR railroad corridor,** modifications to existing traffic signals and lighting, major public and private utility work, a maintenance facility, TPSS, and OCS. Steve was involved in **initial price negotiations starting from 75 percent drawings through final drawings issued for construction ultimately leading to a GMP.** Similar to what is anticipated on the Project, Steve was responsible for extensive stakeholder outreach. Steve led coordination and outreach efforts with the various CoP bureaus, four railroads **(including UPRR) private utilities, the Agency, ODOT, local businesses,** and the strong, vocal bicycling community. Steve found opportunities to incorporate accommodations requested by these stakeholders while still maintaining the project's schedule and budget. During construction, Steve led with a transparent, collaborative style which resulted in the project meeting budget and schedule goals. Steve was instrumental in developing innovative approaches to maximize DBE participation, resulting in a utilization rate of 18.8%, significantly over the goal of 16%.

"I just wanted to acknowledge the great job done by Stacy Witbeck recently on the Portland Streetcar extension in the Pearl District. Not only did they remain on schedule, but they kept the work sites clean, adequately directed traffic and their employees were respectful of those most impacted by this work, including the many retail businesses in the area. Having presided over or having been heavily involved in many retail and mixed use development projects over the past 35 years, it is indeed always refreshing to see a contractor perform with such high standards." Susan Miller, Hoyt Properties Representative

Portland Transit Mall, TriMet – Portland, OR
Project Manager | August 2006 to February 2009
This was a $158 million CM/GC light rail project for 3.5 miles of single track in the downtown Portland business core. Scope included utility relocations and coordination, civil construction, embedded track construction, four streetcar crossings, **modifications to an existing 100-year-old UPRR bridge structure,** all systems, OCS and signaling work, ductbanks, and 12 station platforms. Shutdown work was required for all connections to the existing TriMet light rail system at the Steel Bridge and eight light rail or streetcar track crossings. The team successfully completed all track crossings without any incidents. Because of the team's total commitment to public relations, **apprentice training, DBE involvement, and intensive coordination with the CoP bureaus and various business stakeholders, the project was completed two months ahead of schedule and within budget.** Steve played a key role in successfully meeting cost and schedule goals while maintaining an excellent safety record on this job. He also oversaw the management of subcontractors. He was able to effectively manage the large diverse staff while maintaining focus on schedule, budget, and field support by empowering and mentoring others to perform better throughout the life of the project. **In large part due to Steve's efforts, the project was recognized by NAMCO for Leadership in Transportation, Justice, Innovation, and Excellent, as well as the NAMCO Project of the Year Award. Additional achievements included the honor of Oregon Building Congress, Union Contractor of the Year Award.**

West Side Combined Sewer Outflow (CSO) Program, City of Portland, Bureau of Environmental Services – Portland, OR
Senior Project Engineer | September 2002 to August 2006
This $300 million project included construction of the 220MGD Swan Island Pump Station. The underground pump station portion of the project exceeded $90 million in value and consisted of a 130-ft diameter, 160-ft deep structure. Adjacent facilities included a large confluent shaft, O&M building, 115kV substation, and near-surface site utilities. As Senior Project Engineer, **Steve oversaw all engineering efforts, including directing a staff of on-site personnel, survey crews, and CAD operators.** Steve also managed the work as Superintendent for the last sixth months of active construction, during which he was able to accelerate the project schedule and complete the work on-time and within budget.

Highway 101 Seismic Retrofit, Caltrans – Larkspur, CA
Project Manager/Superintendent | May 1996 to February 1998
Steve managed the project's 40-person labor force, equipment, and office staff on a $20 million Caltrans seismic retrofit of a Highway 101 concrete bridge. The project consisted of the construction of temporary access trestles, pile driving, steel shell installation (up to 8 in diameter), concrete columns, and bent caps. Most of the work was performed over water and around highway traffic. There were over 15,000 cy of concrete placed. Steve coordinated the use of a barge to reach drilling locations with pile drill/auger. By directing all aspects of the project, the team completed the scheduled work on time, within budget and without disputes.

DAN RAYNOR, PE, SE | PROJECT-WIDE CONSTRUCTION MANAGER, CONSTRUCTION MANAGER/SUPERINTENDENT – LONG SPAN BRIDGE

15 YEARS WITH AMERICAN BRIDGE COMPANY (AB) | **34 YEARS IN THE INDUSTRY**

RESPONSIBILITY ON THE PROJECT

During pre-construction, Dan will support the team's effort to deliver a constructible design using complex bridge design and construction management expertise to identify innovative concepts and actively participate in the Agency's Pre-Construction Services Tasks. During construction, Dan will be on-site, maintain a safe project site, and oversee field and subcontractor personnel to ensure safe and high-quality operations for workers and the public on behalf of the Project Team and JV. He will have stop-work authority and direction over daily construction operations for the entire project, including the long-span bridge portion of the project. His leadership will eliminate the siloing effect that can occur on large projects and foster cooperation throughout all phases and locations of work.

EDUCATION

M.S., Civil Engineering, University of Washington – Seattle, WA

B.S., Civil Engineering, University of Washington – Seattle, WA

CERTIFICATIONS AND TRAININGS

- Registered PE, SE, CA
- Registered PE, SE, WA
- OSHA 30-Hour
- Responsible Managing Individual (RMI) for AB's Oregon Contractor's License

WORK HISTORY

Dan has 34 years of experience managing projects of similar scale and complexity. He is a long-time resident of Portland and a graduate of the University of Washington. Throughout his career, Dan has held leadership roles on 10 design-build projects with a total value exceeding $5 billion and is regularly involved in the pre-construction/design phase of AB's alternate delivery projects. He has extensive construction management experience, including coordination and management of large construction teams for complex, long-span bridges. He leverages his technical engineering expertise to propose innovative solutions to maximize efficiencies, meet project milestones, and ensure design constructability. Dan recently completed a Construction Manager role for AB's subcontract for the demolition and construction of the West Approach Bridge South, a major portion of WSDOT's SR 520 Montlake to Lake Washington I/C and Bridge Replacement project.

"I've been very impressed with American Bridge and Dan Raynor's performance on this project. The number of citizen complaints from these work operations have been very minimal while the quality of work has been high" Dave Becher, WSDOT Project Manager, SR520 Montlake Project

Dan excels at cultivating collaborative group dynamics that enable teams to achieve excellence in safety, mobility, quality, public interaction, and environmental compliance while using the latest in engineering and construction techniques. On the $3.5 billion Tappan Zee Bridge design-build project, Dan managed 15 field engineers and 20 temporary works design firms with design contracts totaling $20 million. Under Dan's leadership, the temporary works engineering team applied accelerated construction techniques such as bridge launching, heavy lifting equipment, and unique staging to minimize impacts on traffic and accelerate construction. In addition, Dan is well-versed in effectively coordinating with stakeholders and collaboratively integrating with public and private entities. On the $1.3 billion Queensferry Crossing design-build project, he successfully managed more than 150 stakeholders, including municipalities, nearby businesses, and adjacent contractors, subsequently incorporating their input into the design.

RELEVANT EXPERIENCE

SR 520 Montlake to Lake Washington I/C and Bridge Replacement, Washington State Department of Transportation – Seattle, Washington
Construction Manager | November 2018 to Present

AB is a dedicated design-build subcontractor with complete responsibility for the demolition of the existing bridge and marine structures and the design and construction of the new one-mile-long, seismically isolated, precast concrete bridge. As AB's lead for the project since the RFQ phase, Dan has overseen the design and construction of the new span and the demolition of the existing. **His work included the development of an innovative precast concrete column and cap scheme, which accelerated and simplified construction.** In addition, he was instrumental in creating a mitigation schedule during the COVID-19 pandemic and alternative delivery options for materials during a teamster's strike. **Dan is extremely familiar with the demolition and construction of structures in an urban environment with environmental constraints. He developed cut and removal demolition methods, oversaw the installation of deep foundations and 84 drilled shafts, integrated seismic isolation into the design, and brainstormed efficient construction methods using accelerated bridge construction to limit impacts.** As a result of the project team's effort, the project won the **2021 WSDOT Environmental Excellence Award** for contributions to the protection of Washington's natural resources.

Third Street Bridge, City of San Francisco Public Works Department – San Francisco, CA
Operations Manager | March 2017 to July 2022

This project was for the rehabilitation of the existing single leaf bascule bridge located on Third Street in San Francisco. The bridge, which originally opened in 1933 is **located in a dense urban and industrial neighborhood**, directly adjacent to the Major League Baseball stadium, requiring deliberate phasing and traffic control to minimize impacts. AB's scope included extensive structural rehabilitation, fender system and substructure repair, and rehabilitation/reconstruction of the bascule's mechanical, electrical, and control systems. Dan supported the AB team with executive level oversight, participation in partnering efforts, and allocation of additional resources to support the on-time completion of the work.

Governor Mario M. Cuomo (Tappan Zee) Bridge, New York State Thruway Authority – Tarrytown, New York
Construction Manager – Temporary Works | December 2013 to August 2018

As part of an integrated joint venture, AB delivered this $3.5 billion design-build project for the construction of two new parallel bridges with cable-stay channel crossings of the Hudson River and several miles of roadway improvements on each approach. Dan was responsible for providing constructability reviews for the permanent works and efficient design and construction of all temporary works on the project. His responsibilities included marine and structural engineering, foundation design, equipment engineering, coordination with multiple stakeholders (including two railroads), and technical communications with the owner and owner's representatives. **The project crosses the Hudson River at one of its widest points, necessitating a massive marine fleet. Dan developed the heavy weather mooring plan for the entire fleet and lifting plans for 40 marine cranes. He also was instrumental in the development of the cable-stay tower and pier formwork.** Dan coordinated with the owner, the owner's consultants, maintenance teams, and stakeholders to ensure the design, means and methods, and schedule resulted in a fully integrated final product meeting all parties' needs. **He led the technical work group to design the west approach girders over Metro North Rail. This avoided outages on the busy commuter line that would have significantly impacted mobility into New York City. The team developed and reviewed plans with all parties and discussed backup methods in the event of launch operation issues, including providing buses at the closest station for commuters to bypass the launch. The girder launch was successful with no outage for the rail line.**

Queensferry Crossing, Transport Scotland – Edinburgh, Scotland
Construction Manager – Permanent Design | July 2011 to November 2013

AB provided design-build services for this high-profile, complex, $1.3 billion cable-stay bridge crossing of two ocean shipping and military navigation channels. Dan oversaw a team of 20 on-site engineers and coordinated public/stakeholder outreach and engagement efforts to obtain construction acceptance permits from public and private entities. He participated in open houses and public involvement/communication presentations. He also coordinated the efforts of designers and independent checking engineers and provided constructability reviews of all design packages. **Dan collaborated with the owner, designer, subcontractors, and more than 150 stakeholders, including local government, military forces, utilities, community groups, environmental agencies, and historic preservation officers, to mitigate potential schedule and budget impacts and accommodate stakeholder requests without time or cost allocation.** For example, the City of Edinburgh requested the replacement of sewer lines beyond the limits affected by the project, which would have slowed approach work by months. As an alternative to a full replacement, Dan and his team worked with city engineers to design a pipe lining to minimize schedule and cost impacts. Additionally, the Secret Intelligence Service (MI6) requested that stiffening be added to the bridge for blast protection after early material orders were placed, fabrication had started, and the design was nearly complete. **Dan implemented a flexible material plan with the fabricator to reuse and reallocate approximately 5% (4,000 tons) of material when changes occurred, eliminating waste and avoiding a six-month delay.** Through innovative design and stakeholder management, the project was delivered on time and $300 million below the engineer's estimate.

Portland-Milwaukie Light Rail Projects-West Segment, TriMet – Portland, OR
Structural Designer | January 2010 to March 2011

Dan provided **structural design for a nearly one-mile steel superstructure bridge that meanders over South Harbor Drive** and under four bridges of the I-5/I-405 interchange and connects downtown to the South Waterfront neighborhood. Dan along with TriMet's bridge architect presented the design concepts to the Portland Design Commission which provided approval with minimal comments. **The project was ultimately constructed by Stacy and Witbeck.**

San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span, California Department of Transportation – San Francisco, California
Senior Engineer/Construction Manager – Temporary Truss | November 2006 to December 2009

The AB-led joint venture was the prime superstructure contractor for the $1.9 billion two-span, self-anchored suspension bridge, replacing a seismically vulnerable portion of the San Francisco-Oakland Bay Bridge. Dan held multiple roles on this project. He was responsible for coordinating and facilitating collaborative task groups for all facets of this mega project. He led technical discussions with the owner and owner's representatives and managed thousands of shop drawings, requiring coordination with Caltrans, detailers, and multiple suppliers. **Dan led the modeling technical work group for developing integrated shop drawings for the east and west pier caps. The cap construction elements were modeled electronically in 3-D, and clash detection software was used to identify problems.** The effort eliminated numerous conflicts and resulted in no major issues during construction and no impact on the construction schedule. Dan also provided marine structural engineering and was the lead for multiple packages of temporary works supply including fabrication for the long-span temporary truss that supported the segmental erection of the steel superstructure. **He provided structural design and analysis for segmental marine crane barges and provided engineering management for the sea transportation plan,** which included analysis and development of sea fastenings for permanent steel and temporary works shipments from Shanghai, China, to San Francisco, California. The work included fatigue analysis, wind and wave analysis, and ship motions analysis for 13 shipments of bridge segments and three shipments of temporary truss and tower elements. For two years of the project, Dan led the fabrication management including quality control for the temporary truss and towers fabricated in Shanghai. Dan was co-located with Caltrans quality control and assurance teams and the 25,000 tons of fabricated truss and towers were delivered on time and fully accepted prior to shipment.

JENE VAN ZANT | CONSTRUCTION MANAGER/SUPERINTENDENT - MOVABLE BRIDGE

7 YEARS WITH AB | **22 YEARS IN THE INDUSTRY**

EDUCATION
B.S., Construction Management, California State University – Chico, CA

CERTIFICATIONS AND TRAININGS
- PTI Certification
- OSHA 30-Hour
- ASBI Grouting Certification
- Construction Survey and Layout School
- Pile Driving and Deep Foundation Training
- Heavy Movable Structures, Inc. Member
- Formwork and Falsework Training

RESPONSIBILITY ON THE PROJECT
Jene will be responsible during pre-construction for working with Movable Bridge Coordinator John Schober, and Demolition/Early Works Manager Darren Lueking to plan the movable bridge scopes of work. This will include early coordination with bascule equipment and machinery suppliers, coordination with specialty subconsultants, and identified DBE subcontractors to prepare for this complex work. He will work with the A&E to prioritize components for early procurements, as well as with the Agency for submission of U.S. Coast Guard permits and approvals. He will also work closely with Darren and the Agency to plan for the existing piers' demolition in order to select the most appropriate method by which to achieve the Agency's objectives. Jene will also apply experiences from past projects training staff in specialty bridge scopes to work with the team to develop new skills within the local craft workforce. During construction, he will have authority over the pier construction, erection of the bascule leaves, and coordination of commissioning activities.

WORK HISTORY
Jene has 22 years of experience leading complex heavy-civil construction projects, including numerous projects in the Pacific Northwest. Jene's experience also includes the recently completed and highly successful Third Street Bascule Bridge project. In his career, Jene has worked in roles ranging from Quality Control (QC) Engineer to Project Manager, providing him with a comprehensive understanding of all critical aspects of work required on complex bridge construction projects. He has experience managing teams of more than 80 professional staff and 45 subcontractors/vendors, experience that will be directly applicable to the management of specialty subcontractors and subconsultants for the movable span. In addition, he has significant experience with precast and CIP segmental girders on long-span bridges from 17 projects as well as long-span steel plate girder bridge demolition. Many of the projects he has worked on include construction of bridges over navigable waters and in congested urban environments with staged construction and MOT planning. Jene's solutions-oriented approach to complex challenges will be a direct benefit to his management of the pre-construction and construction activities related to the bascule bridge.

RELEVANT EXPERIENCE

Edmonton Valley Light Rail Tawatina Bridge, City of Edmonton – Edmonton, Alberta, Canada
Area Manager/Technical Advisor | September 2019 to March 2022

This was a $52 million project for construction of a 16.7-mile light rail route, which includes the Tawatina Bridge. AB was responsible for demolition of the existing Cloverdale pedestrian bridge and construction of the Tawatina Bridge. The bridge consists of an 853-ft, three-span extradosed cable-stay bridge and pedestrian walkway over the North Saskatchewan River. The stay cables on this bridge function as external post-tensioning for the superstructure, which impart a large longitudinal force on the superstructure with only a small uplift component to support the deck vertically. There are seven stay cables running through each leg of the pylons. **The cables use a saddle system provided by Vorpsann Systems Limited and each cable has 40 strands.** Jene provided critical advice to the project team, including applying best practices from past cast-in-place segmental bridges. Jene remained involved through the duration of the Project to support partnering efforts, ensure the team had necessary resources to complete the work safely, and monitor project performance.

Third Street Bridge, City of San Francisco Public Works Department – San Francisco, CA
Area Manager/Pre-Construction Manager| | March 2017 to July 2022

This project was for the rehabilitation of the existing single leaf bascule bridge located on Third Street in San Francisco. The bridge, which originally opened in 1933 is located in a dense urban and industrial neighborhood, directly adjacent to the Major League Baseball stadium, requiring deliberate phasing and traffic control to minimize impacts. AB's scope included extended structural rehabilitation, fender system and substructure repair, and rehabilitation/reconstruction of the bascule's mechanical, electrical, and control systems. **Jene was responsible for the job-start up including baseline scheduling, work planning, contract initiation, including with specialty bascule subcontractors.** During construction, the project experienced a number of complex challenges. First, unforeseen work was added to address deficiencies of some bridge elements that were not visible when the bridge was originally inspected for design, such as warped stringer beams and extensively corroded rack bolts. Second, emergency utility repairs required the City to restrict the available access to the project so the repairs could be completed. Finally, severe weather limited sandblasting and coating operations under the bridge in the critical winter months to low tide "windows", due to the low bridge clearance above water combined with the high water levels exacerbated by king tides and storm surges. **Jene worked with the owner and team to implement an acceleration plan** that combined the last two phases of the project and allowed for multiple shift acceleration. This preserved the project cost by ensuring the project was completed before a second

rainy season so the impacts of the first season were not repeated. This mitigated $8.4 million of potential delays. Although this project was not CM/GC, during negotiations to address costs related to acceleration/changes, **Jene facilitated open book negotiations and shared cost reports and other information with the owner. This approach allowed the City to see firsthand how cost and productions had been developed and led to a mutually agreeable final construction cost.** Despite these challenges, the project was very successful and in large part due to Jene's leadership, the team was awarded the **2021 International Partnering Institute Partnered Project of the Year – Ruby Level.**

Bayonne Bridge Navigational Clearance Program, Bayonne Bridge Navigational Clearance Program - Bayonne, NJ
Project Manager | May 2013 to June 2016
This $743 million bridge program included the installation of a new suspended-span steel roadway within the existing arch to increase the navigational clearance by raising the Bayonne Bridge deck 64 ft. This required rehabilitation and strengthening of the steel arch and constructing new approach structures. The approaches were completely replaced within the existing alignment with new precast segmental structures. Similar to the Project, **construction of the Bayonne Bridge was performed within the existing footprint, which accelerated the schedule and mitigated right-of-way acquisition.** Jene and the team protected the traveling public and neighboring residents during the approach structure construction, which included erection of 800 precast substructure and superstructure segments, weighing up to 125 tons, within and above the existing roadway without incident. **Jene implemented a training program for the precast construction as workers in this region were not typically trained for this method. He led mockups and took lead craft workers to precast yards and mocked up test picks. Jene and his crews also provided on-the-job training for duct and strand installation, bar tensioning, and grouting for post-tensioning.** Similar to the precast segment erection, the construction of the new bascule bridge will require engineered construction procedures and custom lifting devices and equipment to support hoisting the large bridge elements. Jene's experience developing these procedures, devices and equipment for the Bayonne Bridge Project is directly relevant to the work required to plan and execute movable bridge construction.

Tilikum River Bridge, TriMet – Portland, OR
Engineering Specialist | August 2012 to April 2013
This project was a $127 million design-build project for construction of a cable-stay bridge over the Willamette river for TriMet's MAX operations. Jene was responsible for engineering and management support for the teams responsible for the temporary works planning and all project administration. The Tilikum Crossing Segment encountered unexpected challenges, including extended third-party permit reviews, approvals, and revisions to aesthetic guidelines, which threatened to increase the budget and schedule. **Jene and the team partnered with TriMet to resequence construction, add resources, and modify the design and approach to keep the project on target. In addition to complying with all environmental regulations and coordinating with TriMet to obtain permits, the team implemented innovations that reduced environmental impacts. The team's design of the alternative foundation system reduced the amount of in-water work.** The team also designed out the need to improve soil conditions. These efforts avoided a large volume of hazardous waste removal.

I-405 Kirkland Nickel Stage 1, WSDOT – Kirkland, WA
Superintendent | June 2006 to November 2008
This design-build project included the widening of I-405 and replacement of two precast concrete girder bridges. Scope included one new lane in each direction for two miles of the I-405 freeway, three wetland restoration sites, a new, widened bridge, construction of three new noise walls, and upgrades to two existing noise walls. **Jene oversaw all structures and roadway field operations including planning, scheduling, and material procurement. In order to minimize traffic impacts, the project was built in three stages. Jene coordinated with the project stakeholders to maintain schedule updates and worked with WSDOT to notify local stakeholders and the traveling public of upcoming lane shifts for this highly congested section of the I-405 freeway and local streets.** For the project, the contractor and owner co-located to work as a cohesive team. The client's project goals included leaving the environment better than before the project started. Jene and the team applied innovative solutions to create an improved fish-passable culvert under the freeway and restore three wetland sites to offset construction impacts.

JOHN SCHOBER, PE | MOVABLE BRIDGE COORDINATOR

41 YEARS WITH AB | **43 YEARS IN THE INDUSTRY**

RESPONSIBILITY ON THE PROJECT

During the pre-construction phase, John will use his vast experience with movable bridges to provide practical guidance with design, over-the-shoulder review constructability, and budget pricing for this portion of the Project. He will collaborate with the A&E to plan for bascule machine and equipment procurement and the construction team as the Project transitions to early work. John will also be focused on ensuring the movable bridge's mechanical, electrical, civil, and architectural elements are well coordinated and seamlessly integrated. John will work with the team to plan and execute the bascule bridge's commissioning activities in support of an on-time project delivery.

EDUCATION

B.S., Civil Engineering, Northwestern University, - Evanston, IL

CERTIFICATIONS AND TRAININGS

- Registered PE, IL
- OSHA 30-Hour
- AREMA Member
- eRailSafe Certified
- ASME B30 Safety Committee

WORK HISTORY

John has spent the majority of his more than 40 years in the heavy civil construction industry on projects involving the removal and replacement of complex bridges, with a particular emphasis on movable structures. He has worked on virtually every type of movable span, including bascule, lift, and swing, both new construction and rehabilitation. There are few individuals in the industry with the depth and breadth of bascule and other movable bridge experience as John and he has proven his ability to leverage this experience to proactively mitigate risks and project issues. John is a Professional Engineer and has developed detailed erection procedures that incorporate the unique considerations of movable bridges, such as fabrication details, fit, and alignment. In addition, he has experience with long span plate girder, cable-stay, and tied arch structures.

RELEVANT EXPERIENCE

US 150 EB McClugage Bridge Replacement, ILDOT – Peoria, IL
Estimator/Construction Specialist | March 2019 to Present

AB is the steel erection subcontractor on this replacement structure over the Illinois River. The steel superstructure consists of 4,000 ft of plate girders and a 650-ft tied arch over the marine channel. The foundation work, pier construction, and approach steel erection were performed from a temporary trestle built parallel to the new bridge alignment. To keep the marine channel open during tied arch construction, it is being built off-line, on falsework, downstream from the bridge. When complete, the arch will be picked up off the falsework with a combination of barge ballasting and falsework jacking, floated into place, and set down on the permanent new piers. This will occur during a 24-hour marine closure**. John developed the erection procedures for the complex work, coordinating it with AB's in-house and outside engineering firms as part of means and methods development.** AB was brought on to the project after award to lead the steel erection scope, so close communication and strong teamwork was necessary to minimize schedule impacts. **John's experience on this tied arch bridge including erection, float-in, and working on a navigable waterway will benefit the Project as he can provide input on estimating and construction methodology as we evaluate the two fixed signature structure type options.** This will help us select the right option and provide the best value to the Agency.

SR 11: Lake Pontchartrain Bridge Rehabilitation, LADOTD – New Orleans, LA
Estimator/Construction Specialist | May 2018 to Present

This project is for the complete rehabilitation of **two double leaf bascule bridges, including structural steel rehabilitation, steel grid deck replacement, concrete repairs, field machining, drive machinery replacement, control system replacement, operator house rehabilitation, and fender replacement.** John provided detailed information on the unique considerations of movable bridge rehabilitation to the estimating and engineering teams during the procurement and planning phases. This was particularly **critical for the new leaves of one of the structures, which AB decided to assemble off-site, float into place by barge, and erect as one piece with a high-capacity floating crane.** A ringer crane was used to remove the cantilevered portion of the leaf and the same setup was used to set the new portion. **All engineering for this operation was done in-house and relied heavily on John's concepts.** During the construction phase, **John was on-site for all critical phases of work.**

Columbus Road Lift Bridge, Cuyahoga County Dept of Public Works – Cleveland, OH
Operations Manager | December 2011 to April 2017

This project was for the complete rehabilitation of a vertical lift bridge over the Cuyahoga River. The existing **250-ft lift span was floated out and demolished. The existing towers and counterweights were rehabilitated.** Due to site constraints, **a new 250-ft lift span, complete with span-mounted drive machinery and operators house was built on land. The span was walked onto a barge using SPMTs, transported down the river with tugs, and floated into place between the towers.** AB had to coordinate closely with the U.S. Coast Guard for the float-in operation, as the Cuyahoga is a busy commercial waterway. In addition, the river flows right through heavily congested urban and industrial areas, making good staging and logistics planning essential. John was critical in identifying and working with AB's highly specialized machinery supplier, G&G. After award, John performed **buy-out and coordination with major movable bridge subcontractors and suppliers. He oversaw the entire field management team across the project from award through completion. The project was delivered on-time and on-budget.**

UPRR Bridge 305.45 Replacement, UPRR – Sweeny, TX
Operations Manager | February 2017 to September 2019
This project was for the replacement of an **existing railroad swing bridge with a new vertical lift bridge on the existing alignment crossing** the San Bernard River near Sweeny, TX. The new bridge, including towers and machinery was completely assembled on falsework parallel to the existing structure. During a 72-hour rail and marine outage, the existing structure was demolished, and the new structure was slid laterally onto the permanent piers and opened to rail traffic. John worked with the estimating team during the estimating and procurement phases. Once the project was awarded, he performed the buy out and coordination with the major subs and suppliers. During construction he supervised the Field Management Team in all aspects of the Project.

Horseshoe Arch Bridges, TxDOT – Dallas, TX
Operations Manager | February 2013 to December 2018
This project was for new construction of twin 1,125-ft long and 290-ft tall pedestrian true arch bridges, designed by Santiago Calatrava. The bridge was constructed **using a complex system of AB-designed falsework**. The center 312-ft portion of each arch was raised into final position using strand jacks. John was essential in solving a major dilemma right out of the gate. After AB was selected, it was disclosed that the bid was over the owner's budget. The owner approached AB to see if they could develop cost savings to allow the project to proceed. **John led the team that proposed several ideas, the most significant dealt with the numerous steel connection details, simplifying their fabrication and field erection, which made the bridge more economical to build.** John served as the intermediary between the owner, owner's engineer, AB's estimating department, and the necessary subcontractors and suppliers. This transparent estimate process led to an agreed upon price and construction proceeded. **John then performed buy out and continued coordinating with major subcontractors and suppliers, as well as overseeing the field management team.**

Queensferry Crossing, Transport Scotland – Edinburgh, Scotland
Estimator | January 2010 to March 2011
AB provided design-build services for this high-profile, complex, $1.3 billion cable-stay bridge crossing of two ocean shipping and military navigation channels. During the design-build procurement, **John worked with the design engineer to develop splice details for the cable-stay box girders, finding the most economical solution to fabricate and erect them that still met the stringent structural requirements.** He developed the box girder erection procedures, which was essential for accurate pricing. Given the high-profile status of the project, AB had to work under extremely exacting standards, both from the owner and to successfully execute the construction approach. **John facilitated collaboration between all parties to come up with a scheme that met all aesthetic and design requirements while still making the bridge cost-effective to build.** He also worked closely with Jared Carlson, as well as Dan Raynor and Josh Ishibashi. **John and Jared developed the AV launch scheme that avoided impacts to the sensitive marine environment, flora and fauna, historic structures, and nearby residents.**

Woodrow Wilson Bascule Bridge, MdDOT – Ft. Washington, MD
Movable Bridge Specialist | February 2005 to April 2007
The movable bridge portion is a 270-ft long double leaf bascule made up of four individual leaves, side by side to provide the total of 12 traffic lanes over the Potomac River. The superstructure consists of steel plate girders and floor beams with a cast-in-place lightweight concrete deck. The parabolic shaped bascule girders are 204-ft long with a 20-ft maximum depth and weigh over 225 tons each. Some of the movable spans were preassembled, floated into the channel, and raised into place with strand jacks. The substructure was a cast-in-place delta pier. One of the biggest challenges was the sheer size of the bridge; it is the world's heaviest bascule span. **John was an essential resource for the field teams when they ran into challenging construction procedures or had fabrication questions. He provided engineering input and reviewed construction means and methods. John assisted with the alignment of the machinery, drive pinions, and rack segments as well as balancing. John's experience on this major bascule bridge project will lend valuable insight into alignment, fabrication, and field operations on the Project so that components are fabricated properly and fit when they arrive on-site to be installed.**

Madison Street Bascule Bridge, Chicago DOT – Chicago, IL
Operations Manager | March 1994 to January 1995
This project was for a complete rehabilitation of the structural, mechanical, and electrical components of a **double leaf bascule bridge over the Chicago River in downtown Chicago.** John developed the construction approach to remove the existing grating and floorbeam stringers while keeping the leaves in their vertical position. This allowed rehabilitation to occur without blocking river traffic. First, the old span was raised into the vertical position and temporary falsework was placed to safely lock the span into place. Then, the grating and floorbeam stringers were removed and replaced and the machinery refurbished. Finally, the leaves were put back into operation and rebalanced. However, when the time came to close the leaves, AB discovered that a design error caused the new fixed floor system over the counterweight pit, which was slightly different than the old, to come into contact with the movable counterweight. **Knowing that restoring operational functionality was critical, John developed a simple and effective resolution. Material from the top of the counterweight was removed, and the weight difference was made up elsewhere. This solution allowed AB to quickly proceed with work, the leaves met up, and the bridge was opened to traffic.**

FAYE BURCH | DIVERSITY ADMINISTRATOR

24 YEARS WITH FM BURCH & ASSOCIATES

29 YEARS IN THE INDUSTRY

RESPONSIBILITY ON THE PROJECT

Faye will be responsible for working with Jennifer DeLong to oversee the development of Subcontracting and Diversity Plan, Acceptable Worksite Program, and Workforce Program. Faye will be an active leader in DBE outreach, COBID certification efforts, collaborate with the team to develop innovative solutions to maximize participation, and oversee compliance monitoring. She will also oversee workforce development in collaboration with Jennifer, Workforce Development Coordinator Julie Greb, and General Superintendent Steve Carpenter.

EDUCATION

English Literature, University of Oregon – Eugene, OR

Political Science, Portland State University – Portland, OR

Construction Project Management, Portland State University Extended Studies – Portland, OR

WORK HISTORY

For 25 years, Faye has been the principal of a minority- and woman-owned business that specializes in public involvement programs, outreach services, public relations, small business development, economic development projects, construction/project management, and placement of professional construction and construction-related personnel. Faye works in the public, private, and non-profit arenas, bringing her talents and skills as a public policy setter and community activist to her projects. Her style and approach are creatively designed to fit the diverse needs of each client and the subcontracting and workforce communities. Faye is recognized as a strong advocate for DBE businesses and the important role they play in our economy. Prior to starting her own firm, Faye served as Intergovernmental Affairs and Small Business Senior Policy Advisor to former Oregon Governor Barbara Roberts and has also worked with the CoP's Bureau of Development Services as Director of Communications and Liaison to the Commissioner. Among her many civic activities, Faye has held leadership roles with the Urban League of Portland and Self Enhancement, Inc., two organizations that are very important in the minority community. Faye is well known in the Agency's contracting and workforce development community as she was the first consultant in the area to offer these services. She was also the co-founder of NAMCO's Portland Chapter and the Portland Business Development Group.

Faye's achievements include being honored with Multnomah County's Gladys McCoy Lifetime Achievement Award and the DJC of Oregon's Woman of Vision Recognition in 2019, DJC of Oregon Top Newsmaker in 2017, and the DJC of Oregon's Top Service Provider in 2012 based on her efforts on Stacy and Witbeck's SW Moody, Portland Streetcar, and Portland-Milwaukie Light Rail Extension projects.

RELEVANT EXPERIENCE

MAX Red Line Extension and Reliability Improvements Project, TriMet – Portland, OR
DBE and Workforce Coordinator | January 2020 to Present

The Red Line Extension consists of three distinct project work areas and scopes which, when combined, will upgrade the existing single-track facilities and extend the number of platforms serviced by the Red Line. **Faye partnered with Steve W., Cost Estimator John Boknecht, and DBE/EEO Compliance Coordinator Inna Mishchuk** during pre-construction to facilitate initial meetings with TriMet and jointly develop outreach meetings and events. Faye worked with project leadership to match subcontractors with the team in order to develop relationships and create connections. She answered questions and mentored subcontractors related to bids, insurance, training agent status, rates, and reporting. **Faye worked with the team to develop a structured mini-prime role for O'Neill Construction Group, which has been quite successful.** She is also responsible for reporting and monitoring on the project. **Faye publishes a regular newsletter for TriMet, PBoT, and ODOT featuring success stories about COBID-certified subcontractor performance.**

Multnomah County Central Courthouse, Multnomah County – Portland, OR
Workforce Coordinator | August 2017 to August 2020

This project was for construction of the new Multnomah County Courthouse. Faye was responsible for identifying opportunities to increase diversity of staff during both design and construction. She oversaw the administration of the PLA during construction and worked with contractors to ensure DMWESB firms were included successfully. The project included an active Labor-Management-Community Oversight Committee (LMCOC). Faye worked with the project manager to report on labor utilization and project progress at LMCOC meetings. These were also used as a forum to voice concerns, discuss solutions, and make adjustments on the project. Although there were a number of challenges, Faye and the LMCOC members were able to come to agreeable resolutions and keep the project moving forward.

Portland-Milwaukie Light Rail Extension Projects – West Segment, TriMet – Portland, OR
DBE and Workforce Coordinator | September 2011 to May 2014

This was an $88 million CM/GC project for construction of one mile of guideway, over half of which is on a complex 12-span bridge structure and retained fills. The project included in-street construction, dedicated right-of-way and work in high impact traffic areas. Multiple interfaces with concurrent construction projects in the area and tie-ins to existing transit facilities were notable project challenges. Faye was responsible for administration of the Project's DBE and workforce outreach plans. The team achieved 24% DBE participation on the project. Effective workforce development and outreach was essential to this project's success due to the demand on regional resources at the time. Faye worked closely with apprenticeship programs, trade groups, and the Unions to identify low-cost advertising and engagement opportunities and connect individuals to jobs. The project was constructed by Stacy and Witbeck.

Portland-Milwaukie Light Rail Extension Projects – East Segment, TriMet – Portland, OR
DBE and Workforce Coordinator | June 2011 to April 2016

This is a $300 million CM/GC project for construction of approximately seven miles of guideway through neighborhoods, downtown areas, and adjacent to an active railroad. The project included track, stations, retaining walls, bridges, multiple street crossings, utilities, street lighting, and street reconstruction. Faye was responsible for supporting the team in the pre-construction phase with outreach, engagement, and subcontractor bidding support. She also worked with the project team to establish workforce development priorities and programs. The DBE program, which achieved 28% participation, served as a strong foundation in heavy civil construction for many firms. **One success occurred due to Faye's support of Professional Lathe and Plaster. The firm's owner had come up through the trades and was working to get his own business off the ground. Working with Stacy and Witbeck's team, Faye helped the firm become COBID-certified, submit a competitive bid, and participate on the Project. Faye and the team offered significant administrative support to the firm which set them up for success. The firm has gone on to work on numerous projects, including for the Agency, as a Union contractor.**

SW Moody Avenue Roadway and Track Relocation project, City of Portland – Portland, OR
DBE and Workforce Coordinator | January 2011 to December 2012

This was a $31 million CM/GC project for construction of roadway improvements and relocation of streetcar tracks. Faye worked Stacy and Witbeck's project team to establish and administer the DBE and Workforce Development programs. The project achieved 28% DBE participation. There were a number of subcontractors that Faye and the team mentored through the project. A new DBE had recently purchased equipment and taken courses on how to perform striping. **Faye and the team worked in pre-construction to support the firm's estimating efforts on the project. However, on bid day, the firm submitted a price that was well-below typical industry pricing. The firm had grossly underestimated the cost of the work. Recognizing this, Stacy and Witbeck's team and Faye went to the CoP and explained what had occurred and was able to increase the value of the subcontract to a competitive range. The firm did an excellent job on the project and has gone on to perform similar, larger subcontracts throughout Portland.**

Portland Streetcar Loop, City of Portland – Portland, OR
DBE and Workforce Coordinator | July 2009 to September 2010

This project was a $109 million six-mile extension of the Portland Streetcar system under the CM/GC method of project delivery. Faye worked with Steve and the team to develop and implement the DBE and workforce development programs on the Project. **Faye and Steve worked through a number of learning experiences related to administrative support for subcontractors not accustomed to Union labor requirements. Faye and Steve were instrumental in supporting subcontractors through the Union onboarding process to ensure workforce development and DBE goals were balanced.**

Westside Express Services, TriMet – Portland, OR
DBE and Workforce Coordinator | June 2006 to April 2009

This was a $62 million CM/GC project for reconstruction of 14.7 miles of active ballasted railway to provide a new passenger rail line including construction of one new bridge, rehabilitation of two timber ballasted deck bridges, and in-place reconstruction of four railroad timber trestle bridges. Faye supported Stacy and Witbeck's workforce development and DBE outreach efforts. Although not required, Stacy and Witbeck asked Faye to track workforce utilization numbers so that the team could understand the diversity of the workforce and provide information to trade partners. Faye was also instrumental in creating opportunities for subcontractors on the project. **Faye identified a very small, woman-owned landscaping firm that was interested in project. The project team was not comfortable with the subcontractor's ability to perform the work initially. So, Faye organized a site visit to the landscaper's shop and yard. After discussions with the owner and development of a support plan, an initial contract was issued to the firm for about $500,000. The firm has since grown exponentially and now actively mentors other firms in the Portland Metro area.**

I-205 Light Rail Extension, TriMet – Portland, OR
DBE and Workforce Coordinator | January 2007 to June 2010

This $172 million design-build project consisted of 6.5 miles of ballasted and direct fixation double track, nine bridges, 300,000 sf. of retaining walls, sound walls, two at-grade crossings, one cut and cover box tunnel, multiple utility relocations, eight stations, four park and rides, OCS, signals and communications systems, public art, and lead responsibility for civil to systems integration and testing. Faye was responsible for the development, implementation, and monitoring of the workforce and DBE programs on this Stacy and Witbeck Project.

Portland Transit Mall, Owner – TriMet – Portland, OR
DBE Coordinator | August 2006 to November 2009

Stacy and Witbeck was the managing joint venture partner on this $158 million CM/GC light rail project for 3.5 miles of single track in the downtown Portland business core. Faye worked with the team to administer the DBE program, which resulted in 19.7% DBE participation.

Interstate MAX Design and Construction Segments 10A, B, C, and R, TriMet – Portland, OR
DBE and Workforce Coordinator | November 2000 to March 2003

This $104 million CM/GC project consisted of 4.5 miles of ballasted and paved track, relocation of existing utilities, erection of a bridge over UPRR tracks, seven stations, associated civil systems infrastructure work, and coordination and integration with the follow-on systems contractor. This was the first major heavy civil CM/GC project in the region. Faye and the Stacy and Witbeck team were instrumental in setting the tone for DBE subcontractor involvement for projects moving forward. The team piloted numerous best practices on the project, including bonding support and creative packaging of scopes to allow for maximized DBE participation. This project experienced significant challenges related to subcontractor safety and quality compliance, as subcontractors were not accustomed to the requirements of a larger project. **Faye and the team worked through these issues by providing additional oversight, requiring additional work plan reviews, and taking every opportunity to demonstrate safe practices to subcontractors. The project achieved 23% DBE participation and received awards including African American Contractors Federation Prime Contractor of the Year Award and AGC of America's Best of the Best Safety Award.**

JOHN BOKNECHT, PE | LEAD COST ESTIMATOR

22 YEARS WITH STACY AND WITBECK

24 YEARS IN THE INDUSTRY

EDUCATION

B.S., Civil Engineering, Washington State University – Pullman, WA

CERTIFICATIONS AND TRAININGS

- Registered PE, WA
- OSHA 10-Hour
- AGC Advanced Management
- AGC Leadership in Construction

RESPONSIBILITY ON THE PROJECT

John will be responsible for the oversight of all cost estimating activities and tasks on the project, in collaboration with Bridge Estimating Specialists Dan Collins and Ken Shovlin, as well as discipline estimators and task group personnel. John will facilitate a clear, transparent, and organized estimating process that prioritizes collaboration and maximizing the value of the Agency's investment. John will oversee the value engineering process, estimating risk and contingency, and the build-up of the Project's GMP. He will work closely with the Agency's ICE to ensure estimates are aligned and easy to compare. John's goal leading to GMP negotiations will be to support the Agency in understanding exactly how the Project's cost was developed to facilitate efficient negotiations and achieve a GMP.

WORK HISTORY

John has over 24 years of industry experience, 22 of which have been with Stacy and Witbeck on heavy civil CM/GC projects. John began his career in Portland, managing and estimating downtown projects and has steadily advanced his career. Today, John is the Senior Vice President of Estimating for Stacy and Witbeck leading estimates and pursuits with a focus on efficient and cost-effective practices. Before transitioning into this role, John was Project Manager on many large CM/GC projects, leading teams in cost estimating, VE identification and implementation, constructability reviews, and GMP negotiations. His strong background in successfully constructing work gives John a holistic view of the project needs, including construction schedule, subcontractor coordination, stakeholder needs, public safety, and administrative elements. He leverages this experience to produce responsible, comprehensive estimates for Stacy and Witbeck's clients and partners. A Portland resident, John is eager to partner with the Agency on maximizing the value of this local investment.

RELEVANT EXPERIENCE

Various Projects | Senior Vice President, Estimating January 2022 to Present

John's estimating responsibilities include CM/GC, CMAR, design-build, progressive design-build, and bid-build projects throughout the US. In the last year, John has provided estimating management and supported negotiations for the following alternative delivery projects:

- ✓ East San Fernando Valley Light Rail, LACMTA | Progressive Design-Build, $1.5 billion
- ✓ Ogden WSU BRT, Utah Transit Authority | CM/GC, $69 million
- ✓ Vineyard Commuter Rail Station, Utah Department of Transportation | CM/GC, $18 million
- ✓ Kansas City Streetcar Main Street Extension, City of Kansas City | CMAR, $223 million
- ✓ Omaha Streetcar, City of Omaha | CM/GC, $100 million
- ✓ G-Line BRT Improvements, LACMTA | Progressive Design-Build, $300 million
- ✓ North Coast Corridor, Caltrans | CM/GC, $665 million

MAX Red Line Extension and Reliability Improvements Project, TriMet –Portland, OR
Lead Cost Estimator | December 2019 to Present

This CM/GC project includes three different, but interconnected scopes: double tracking the Red Line from the Portland International Airport, rebuilding the airport station, double tracking and construction of a new station at the Gateway Transit Center **with a bridge over I-84 and UPRR,** and extending the Red Line service from the Beaverton Transit Center to the Fairplex station with track, switch, and signal improvements. Work includes utility work, earthwork, trackwork, station platforms, bridges, major box structures, retaining walls, multi-use pathways, pedestrian improvements, lighting, traction power systems, communications and signaling systems, and related facilities. Work is being performed adjacent to the active light rail system, with all work planned to maintain service on the existing Red Line. **John was responsible for all estimating on the Project, including the iterative cost estimates, working with TriMet's ICE, development of VE concepts such as bridge modifications, subcontractor solicitation, and GMP development and negotiation.**

Steel Bridge Transit Improvements and Track Rehabilitation, TriMet – Portland, OR
Estimating Oversight | April 2019 to May 2022

This was a five-year task order-based CM/GC contract to rehabilitate and improve reliability and capacity on TriMet's light rail system. The work has included replacement of special trackwork, curved track, and crossing panels. A significant and unique task order was to rehabilitate the track across the historic **Steel Bridge, a lift bridge over the Willamette River that also carries UPRR freight traffic.** The team worked all hours to replace the track across this 101-year-old lift bridge, including replacement of 4,000-tf of 36-year-old rail and special track elements. Stacy and Witbeck brought in 25 craft workers from projects in Salt Lake City, Tempe, Seattle, and Tacoma as additional resources to staff the project. The team completed the work and returned track to service on time. **John was responsible for working with the team to develop an overall budget for this task, plan resources, and vet means and methods.**

Sixth Street Viaduct Replacement Project – City of Los Angeles, Bureau of Engineering Department of Public Works – Los Angeles, CA
Estimating Oversight | April 2019 to July 2022

This project was for the replacement of the iconic Sixth Street Viaduct, located in downtown Los Angeles. The overall program included demolition of the existing **3,500-ft viaduct and construction of a replacement bridge which is a signature cable-concrete-arch suspension bridge.** The work included constructing 11 concrete arch spans including spanning the Los Angeles River basin. The new bridge **spans two active rail corridors (18 tracks total), including UPRR, and adjacent rail yard facilities** and included the construction of the new river gateway portal to the Los Angeles River. This new tunnel structure extends beneath nine active railroad lines. John provided support to the project team in the development of cost-saving concepts, material selections, and alternative approaches.

Mid-Coast Corridor Projects, San Diego Associations of Governments (SANDAG) – San Diego, CA
Estimating Oversight | April 2019 to November 2021

This was a $1.5 billion CM/GC program anchored around the 11-mile extension of MTS' Blue Line trolley (light rail). The project included eight distinct segments which were combined into the single CM/GC project due to the complexity of their interfaces. These supplements included extension of the light rail system, **an arched roadway bridge over I-5,** two commuter/freight railroad double tracking projects, a bikeway project, and a variety of associated civil construction scopes. Seven miles of the project are within the LOSSAN commuter/freight rail corridor, which is the second busiest rail corridor in the nation, and the remaining four miles are elevated, cross I-5 twice and terminate in a busy downtown area. **This required the team to coordinate constantly with Amtrak, Coaster, and BNSF.** This highly successful CM/GC project used multiple GMPs, John supported the team in estimating and negotiating follow on contract supplements.

East Link Extension – Downtown Bellevue to Spring District, Sound Transit – Bellevue, WA
Pre-construction Manager/Project Manager | July 2015 to April 2019

This was a $422 million GC/CM project for the construction of 1.9 miles of new light rail through downtown Bellevue, including retained cut/ fill segments, **a major cast-in-place segmental bridge over I-405, precast concrete bridges,** and four stations. The project also included the north tunnel portal, utilities, civil systems infrastructure, and storage track. Much of the structures work was being performed during nights and weekends, requiring complex phasing and sequencing while maintaining traffic and business access. **John was responsible for the day-to-day oversight of the project during pre-construction and into construction. This included performing design and constructability reviews, subcontract package development, risk identification, value engineering concepts, and helping advance the estimate to a GMP.**

First Hill Streetcar, City of Seattle – Seattle, WA
Project Manager | January 2011 to July 2015

This was a $74 million GC/CM project to construct a 2.5-mile double track streetcar system in downtown Seattle. Scope included trackwork, full reconstruction of existing roadways, utility relocations and improvements, ADA sidewalk upgrades, a 1.2-mile dedicated bikeway, two pedestrian plazas, 15 station platforms with canopies, a new LEED Gold-certified maintenance facility and yard, OCS, street lighting, and traffic signals. This project required extensive coordination with area hotels, businesses, residents, and stakeholders. Major stakeholders included three medical centers, two universities, Century Link Field, Union Station, King County Metro, city parks, the Seattle Farmers Market, and International District restaurants and shops. **John was responsible for overall project delivery including safety, quality, schedule, estimating, cost controls, subcontract management, and stakeholder relations, including the LEED Gold-certified maintenance facility.** One highlight of John's public relations and outreach efforts was related to coordination with the Capitol Hill Farmers Market. Summer construction required that parking be eliminated along the two blocks before the market. As a result, vendors had to transport their produce to the market from blocks away. The project staff volunteered each weekend to help pack the literal tons of produce and equipment up the street so that vendors wouldn't suffer this impact.

Airport TRAX Light Rail Extension, Utah Transit Authority – Salt Lake City, UT
Project Manager | May 2008 to December 2010

This was a $221 million CM/GC contract for construction of 6.5 miles of light rail consisting of four bridge structures with **one significant viaduct removal/replacement over active UPRR and commuter rail corridor**, six platforms including an elevated platform on the viaduct with vertical connection to a commuter rail line, paved and ballasted track, associated utility relocations, and a tie-in with an active light rail system. **John was responsible for overall project delivery including safety, quality, schedule, estimating, cost controls, subcontract management, and stakeholder relations. His role included pre-construction services beginning at the 30 percent design stage, including extensive value engineering and innovative risk sharing and alliance agreement concepts that resulted in incorporating a new viaduct for the City using shared contingency funds.**

South Lake Union Streetcar, City of Seattle – Seattle, WA
Construction Manager/Project Manager | April 2006 to October 2008

This was a $40 million GC/CM project consisting of 2.6 miles of paved track construction, nine stations, 26 intersection crossings, including seven crossings, and a maintenance facility and yard. The alignment was within the downtown business district, requiring complicated pedestrian and vehicular traffic control. John was responsible for overall project delivery, including estimating and pre-construction tasks, and construction tasks including safety, quality, schedule, subcontract management, stakeholder relations, and job close-out.

South Waterfront Central District Street Improvements, City of Portland – Portland, OR
Project Manager | September 2005 to May 2006

This was a $4 million project that included the construction of 20 new city blocks of dry utilities, storm detention structures, sidewalks and roadways. John was responsible for overall project delivery to include safety, quality, schedule, estimating, cost controls, subcontract management, and stakeholder relations. The work also had to be coordinated with construction of the CoP's Aerial Tram project.

JENNIFER DELONG | PRE-CONSTRUCTION MANAGER / DEPUTY PROJECT MANAGER

9 YEARS WITH STACY AND WITBECK

16 YEARS IN THE INDUSTRY

RESPONSIBILITY ON THE PROJECT

During the pre-construction phase, Jennifer will be responsible for coordinating project administration efforts, including the on-time development and submission of project deliverables. She will spearhead the organization of the Project's task groups and maintain a pre-construction focus on achieving the Agency's objectives. She will also oversee the DBE and Workforce development efforts in both phases of the Project.

EDUCATION

B.S., Business Management, Minor Construction Management, Boise State University – Boise, ID

CERTIFICATIONS AND TRAININGS

- 30-Hour OSHA
- Roadway Worker Protection (Railroad)
- Equipment Training Safety Program
- Safety Culture Excellent Workshop (Train the Trainer)

WORK HISTORY

Jennifer has over 26 years of management experience and 16 years of construction experience, focused entirely on heavy civil public infrastructure projects. Jennifer began her construction career on a light rail project in Portland before moving to Salt Lake City to manage major transit and transportation projects. She has an in-depth understanding of all facets of infrastructure construction, including extensive experience overseeing civil field work and working closely with cities, utility owners, and other key stakeholders to achieve project deliverables. She has developed a reputation for her ability to identify solutions to complex problems. She is an exceptional planner, often optimizing approaches to minimize impacts and shorten durations. Her experience includes coordination with major stakeholders, municipalities, subcontractors, and adjacent contracts for scheduling, access, and inspections. Jennifer is also an advocate for diversity in both staff and craft roles. She supports Stacy and Witbeck's Women's ERG by coordinating speakers and facilitating conversations and has recently been appointed to advise in the firm's overhaul of employee evaluations to increase transparency and equity.

RELEVANT EXPERIENCE

Ogden to Weber State University Bus Rapid Transit, Utah Transit Authority (UTA) – Salt Lake City, UT
Project Manager/Construction Manager | January 2021 to August 2023

This was a $68 million CM/GC project that increased bus services along a 5.3-mile route connecting the Ogden Intermodal Transit Center, downtown Ogden, Weber State University, and McKay-Dee Hospital. Scope included utility work, earthwork, roadway reconstruction, retaining walls, architectural concrete, new stations, pedestrian improvements, traffic signals and bus charging facilities. Major work on campus was performed during the summer months to avoid impacting the university. Jennifer began on the project as Construction Manager and was responsible for **leading the construction team in safely executing the work, developing and maintaining the overall project schedule, updating the owner on project progress,** coordinating with key stakeholders, and ensuring the project is delivered on time and on budget. Because crews were spread across many miles, **Jennifer instituted a daily safety meeting with all crews so that everyone on the Project knew what was occurring each day.** She then transitioned into the Project Manager role where she oversaw the on-time, within budget completion of the project. The new route opened to the public in August with high praise from the community, client, and stakeholders.

"As one who has done this work yourself, you know how difficult it is to handle third party utility coordination and the curve balls that come with this work. Your team [of field engineers] is very capable and I feel I have been given access to an "A" team and I wanted to pass along my appreciation... Also would like to add, Jen, without support from the top, things wouldn't move as smoothly as it did. I'm not sure if you get a lot of feedback, but you have assembled a winning team and I hope I get the opportunity to work with you again on a future project" Joe Johnson, UTA Utilities Coordinator

Stadler US Rail Facility, Stadler US – Salt Lake City, UT
Deputy Project Manager | August 2018 to March 2020

The project consisted of constructing a 0.6-mile test track at Stadler's only passenger rail vehicle manufacturing location in the U.S. The track is designed for testing and commissioning trains before they are shipped to clients throughout North America. The scope included ballasted yard and test track, embedded track, direct fixation track, and pedestal track for assembly and commissioning areas. Additional scope included installation of the OCS system to support AC and DC systems depending on vehicle type, provisions for a future third rail when a vehicle procurement requires this capability, and relocation of a wheel truing machine. Jennifer was responsible for **managing all site construction, estimating and negotiating contract changes, permitting, as well as scheduling, resource allocation, and oversight for the subcontracted scopes.** She participated in weekly progress meetings, prepared project billings, reviewed and priced design changes, and coordinated with impacted third-party utilities and other stakeholders.

Downtown Redmond Link Extension, Sound Transit – Redmond, WA
Utilities/Drainage and Systems Lead | February 2019 to January 2021

This is a $749 million design-build project consisting of 3.4 miles of elevated, retained cut/fill, and at-grade double track to extend the Link light rail system. The project also includes one at-grade and one elevated station, bus transit facilities, a parking garage, structured and surfaced multi-use trails, civil and site work, roadway work, restoration landscaping, and wetland and stream mitigation work. Work also includes two traction power substations,

OCS, signal system, communications system, and utility work. **Jennifer led the drainage, utility (wet and dry) and systems task group from RFP to Notice to Proceed and through the 90 percent design.** She managed all meetings with the selected subcontractors, utility agencies, the design team, their consultants, Sound Transit, and the City of Redmond.

Airport TRAX Light Rail Transit Extension, UTA – Salt Lake City, UT
Civil Field Engineer | November 2010 to October 2012
This was a $221 million CM/GC contract for construction of 6.5 miles of light rail to serve the Salt Lake City Airport. Scope elements included three bridge structures with **one significant viaduct removal/replacement over active UPRR and commuter rail corridor,** six platforms including an elevated platform on the viaduct with vertical connection to a commuter rail line, paved and ballasted track, associated utility relocations, and a tie-in with the active light rail system. Jennifer was responsible for **all civil scopes of work including demolition, mass excavation, subgrade prep, concrete flatwork, roadway reconstruction, track guideway construction, landscaping, and various finishes.** She coordinated schedules for all civil crews including weekly, four-week, 90-day, and job-to-date progress schedules. She analyzed architectural drawings and contract specifications and developed work plans for all civil scopes of work. She reviewed daily and monthly costs/productivity reports and assessed impacts on the total job budget for all civil work. Jennifer wrote RFPs, evaluated bid proposals, created contracts, and managed subcontractors. Jennifer partnered with UTA, the design team, and city inspectors to resolve field conflicts and design issues.

"The collaborative partnership that was created on the project was critical to its success. Stacy and WItbeck established a partnership among UTA, the design team, and all stakeholders on the project which truly fostered a team approach to every issue and innovation idea on the project. Their performance as a CM/GC has set the new standard in the industry and I feel that they are truly remarkable business partner." Michael Allegra, former General Manager, UTA

Jordan River Service Center Project, UTA – Salt Lake City, UT
Field Engineer | February 2009 to March 2010
This was a $15 million contract to modify a 200,000-sf former warehouse building and approximately 24 surrounding acres for use as a maintenance facility and yard to store and service up to 100 UTA vehicles. The yard portion of this project consisted of ballasted tracks, four storage tracks, a yard runaround loop track to provide connection to the main line by a double crossover, an electrical OCS, connections to the West Valley City Line, and site grading, underground utilities, concrete flat work, asphalt pavement for roadways and parking, fencing, landscaping, and yard lighting services. Jennifer was responsible for the field engineering duties for all disciplines on the project including **underground, civil, and track.** She reviewed daily and monthly costs and productivity and assessed impacts on the total job budget. **She managed all subcontractors on the project and created and updated project schedules** using Primavera P6. Her additional tasks were takeoffs, submittals, RFIs, and document control.

West Valley TRAX Light Rail Transit Extension, UTA – Salt Lake City, UT
Cost/Office Engineer | February 2009 to June 2009
This was a $199 million CM/GC project for construction of 5.5 miles of light rail, **four bridges with one spanning a UPRR rail yard, OCS, four platforms, underground utility relocations, significant geofoam fill in seven locations,** ballasted and paved track sections, and a tie-in to an active light rail system. Jennifer was partnered with the project engineers to manage the project job budgets. She reviewed weekly and monthly cost reports with the engineering team. **She also generated LPRs, daily costs, and managed provisional sum cost codes. Jennifer assisted with miscellaneous takeoffs, submittals, and fieldwork.**

Portland Transit Mall, TriMet – Portland, OR
Field Engineer | May 2008 to August 2008
This was a $158 million CM/GC project for construction of a 3.5-mile single track light rail loop through downtown Portland. Pre-construction efforts included design and constructability reviews, schedule analysis, and VE efforts. One of the most important aesthetic features of the project was the large areas of brick pavers on sidewalks and intersections. Access was maintained for vehicles and pedestrians into local streets and businesses adjacent to the project. A portion of the project was directly adjacent to the Square. An aggressive commitment to public relations, apprentice training, and DBE involvement was made and through extensive coordination with the CoP, local agencies, and various business stakeholders, these goals were realized. Jennifer was responsible for takeoffs, scheduling, subcontractor management, submittals, RFIs, and work plans.

DARREN LUEKING | DEMOLITION/EARLY WORKS MANAGER

28 YEARS WITH TRAYLOR | **30 YEARS IN THE INDUSTRY**

RESPONSIBILITY ON THE PROJECT

Darren will be responsible for focusing project efforts on the critical demolition and early work packages on the Project. He will work with Dan R., Jene, and John B. to evaluate demolition approaches and identify early work packages. He will be a critical resource to the A&E in providing constructability feedback to prioritize design and reduce overall Project risk. During construction of these scopes, Darren will work with Steve C. to ensure all work is planned in detail and executed according to those plans. Darren's experience with movable bridges and long span bridges makes him the ideal resource for the Project.

EDUCATION

B.S., Construction Engineering and Management, Purdue University – West Lafayette, IN

CERTIFICATIONS AND TRAININGS

- OSHA 30-Hour
- First Aid/CPR/AED
- TEEX Traffic Control Supervisor
- Certified Crane Operator
- ASBI Grout Technician
- PTI Level 2 – Bonded Tendon Technician
- OnBase Document Control Administrator

WORK HISTORY

Darren is an experienced heavy civil construction professional with 30 years' experience. He has been involved in the construction of cable-stay bridges, precast segmental bridges (balanced cantilever as well as span-by-span erection methods), cast-in-place segmental bridges, bascule bridges, structural steel girders, and conventional precast girder bridges. He has experience with multiple contract delivery types including CM/GC, progressive design-build, hard bid, design-build, private negotiated, and public private partnerships. His career has progressed from being an intern, to a cost scheduling engineer, to project engineer, to project manager, to lead estimator, to pursuit manager on projects ranging from $10 million to $3.2 billion. In addition to construction operations, he has considerable experience in safety, recruiting, training, IT, and document control that was gained through hands-on experience and has led to improvements to Traylor's construction and business operations.

RELEVANT EXPERIENCE

Various Projects
Pursuit Manager/Construction Services Advisor | December 2020 to Present
Darren is responsible for management of various alternative delivery pursuits including CM/GC, design-build, and progressive design-build projects. He oversees all facets of solicitations, including selection of designers, consultants, and subcontractors. Darren is responsible for setting the tone during procurement for collaboration by facilitating task groups and working sessions. He develops preliminary schedules, works with the team to identify means and methods, and foster communication and innovation. This experience has included leading estimating teams on single pursuits up to $3.5 billion. Darren is also involved in conducting safety and quality audits on ongoing projects, which involve inspection of field and office work, interviews with staff and craft, and review of operations and processes.

Sam Houston Tollway Ship Channel Bridge Replacement, Harris County Toll Road Authority – Houston, TX
Deputy Project Manager | January 2018 to November 2020
This $568 million project is for the construction of two landmark cable-stay bridges across a channel. The unique design of the bridges included a pair of towers that are built in phases and be connected at two locations once complete. This project also includes a precast segmental superstructure for the main span, a conventional bridge design for the approaches, and demolition of the existing structure. Darren supported project planning efforts, including review, selection, and construction work planning of the precast segmental casting equipment, materials, and processes. The original design of the bridge was a precast segmental main span which was later changed to a composite steel with precast deck panels. The cable-stay pylons are more than 500-ft tall and the main span is more than 1,200-ft long. Foundations for the project were large diameter drilled shafts with lengths up to 200 ft. **Darren was responsible for selection of the precast superstructure formwork system and setting up of the casting yard to cast the segments. Additionally, he was responsible for the selection and negotiation of major contracts for the segment erection and demolition equipment, cable-stays, post tensioning, rebar, and electrical contracts.** He was also responsible for coordinating the set-up, training, and use of Project Management software and defined processes, coordination with major stakeholders and utilities involved in the project.

Airport Guideway and Stations, Honolulu Authority for Rapid Transit – Honolulu, HI
Deputy Project Manager/Structures Manager | September 2016 to December 2017
This project was for construction of 5.2 miles of elevated guideway and four train stations, with cast in place substructure on large diameter drilled shafts with lengths up to **350 ft, with precast segmental superstructure with span lengths up to 150 ft, that was erected using overhead span-by-span erection gantries. The project required extensive coordination with local stakeholders and the public. More than 2,700 precast segments were cast, transported, and erected without incident.** Darren managed the estimating team for Traylor on the project and pre-construction efforts for the design of the substructure, superstructure, rail, and stations. **He was responsible for the selection and negotiation of the casting yard set up, formwork, and equipment, erection gantries, substructure formwork and equipment, concrete supplier selection and mix design development.** He also assisted with the development of the project budget and schedule and managed cost control efforts and reporting.

Galveston Causeway Bridge Replacement, Texas Department of Transportation – Galveston, TX
Project Engineer/Assistant Project Manager | August 2003 to June 2009

This was a1.5-mile-long twin bridge over the intracoastal waterway, with a twin cell segmental main span in excess of 300 ft over the intracoastal waterway. **Bridge foundations consisted of more than 960 drilled shafts up to 120-ft deep. The project also required the demolition of two existing bridges over the intracoastal waterway, as well as removal of an abandoned bascule and bridge foundations from an original 1910 bridge.** Marine concrete was delivered via a portable floating batch plant. Darren was responsible **for estimating, planning the work, and overseeing the construction of the project as well as the demolition work to be performed.** He developed and maintained the project schedule. He was also responsible for the **procurement and management of major subcontractors and materials, development and approval of submittals, work plans, and permits with several agencies including the U.S. Coast Guard, Army Corp of Engineers, and TxDOT.**

National Heavy Civil
Recruiting, Estimating, and IT Initiative Manager | June 2009 to September 2016

Darren managed division recruiting efforts for both experience and college recruiting efforts nationwide. He attended career fairs, interviewed candidates, and assisted with selection of candidates. During this time, Darren was also instrumental to the estimating efforts on numerous heavy civil projects from $100 million to $3.5 billion. He performed quantities take-offs, pricing of work, selection of means and methods, and solicitation and selection of subcontractors and suppliers. Darren was also responsible for the development and integration of company wide Project Management software with existing enterprise content management system, and accounting software. He also oversaw the training of employees on use of new software throughout the company.

17th Street Causeway Bascule Bridge, FDOT – Fort Lauderdale, FL
Project Engineer | September 1997 to January 2002

This project was for a new **1,908-ft bridge constructed along existing alignment.** The project included **precast segmental approaches to delta shaped bascule piers that spanned an intracoastal waterway.** All foundations on the project were drilled shafts with lengths up to 120 ft. The project included **phased demolition of the existing bridges, complete removal of existing bascule piers, as well as removal of a temporary dutch style temporary movable bridge. The project required extensive traffic control coordination for pedestrian, vehicular, and boat traffic.** Darren was responsible for **procurement of major components bascule steel and machinery, casting yard formwork, falsework, and structure formwork, and cofferdams.** He developed and maintained the project schedule. He also coordinated with subcontractors and suppliers for the development of **shop drawings, submittals, work plans, and erection plans for the precast segmental and the bascule leaves. Darren performed extensive coordination for the forming and shoring of the delta shaped pier between cofferdam, falsework, formwork, and bascule steel and machinery manufacturers and engineers.** He was also responsible for overall demolition planning, coordination, and execution. **100% of existing bridge was recycled or deposited in marine reef.**

STEVE CARPENTER | GENERAL SUPERINTENDENT

16 YEARS WITH TRAYLOR | **41 YEARS IN THE INDUSTRY**

RESPONSIBILITY ON THE PROJECT

Steve will be responsible for supervision of all construction operations in conformance with the highest standard of safety, quality, and environmental compliance. Steve will also coordinate with all outside agencies and third parties impacted by the work, including the local community. His responsibilities will include support of procurement and management of all craft personnel, subcontractors, and vendors. One of Steve's most important responsibilities will be setting the tone for harmonious relations and inclusion amongst craft team members. Steve will work with Faye and Workforce Development Coordinator Julie Greb to ensure that a safe workplace with strong morale is established and maintained on the Project.

EDUCATION

El Camino Community College, Torrance, CA

Pile Drivers Union Apprenticeship Program

CERTIFICATIONS AND TRAININGS

- 30-Hour OSHA
- Certified Rigging and Signal Person Instructor
- Crane Assembly/ Disassembly Director
- NCCCO Non-Operator
- PTI Level 1 & 2 Certified
- OSHA 40 Hour HAZWOPER
- First Aid/CPR/AED

WORK HISTORY

Steve has more than 40 years of industry experience, including over 30 years of experience in construction management of complex marine and heavy civil projects. His experience includes managing project staff, subcontractors, day-to-day operations, and project costs and schedule. Steve has experience leading field operations for large complex bridge projects over active waterway channels, including the $1.9 billion San Francisco Oakland Bay Bridge Self-Anchored Suspension Span Foundations Project and $3.5 billion Governor Mario M. Cuomo (Tappan Zee) Bridge. Steve began his career as a pile driver, barge foreman, and in other supervisory roles. This experience as a direct craft supervisor provides him with meaningful insights and lessons learned in developing strong cultures of safety, accountability, and inclusion among craft workers.

RELEVANT EXPERIENCE

Mount Vernon Viaduct, San Bernardino County Transportation Authority – San Bernardino, CA
General Superintendent | September 2020 to July 2021

The bridge project entails **surgically deconstructing an existing 1,016-ft bridge built in 1934 that spans over the Burlington Northern Santa Fe Railroad (BNSF) Railway Intermodal Yard** and replacing it with a structure twice as wide (80 ft). The bridge **spans over 20 railroad tracks,** including five passenger rail tracks servicing the San Bernardino Station, three transcontinental freight tracks out of the LA/Long Beach Ports complex, six storage tracks, and six intermodal yard tracks. Steve was responsible for providing **feedback to internal and external engineering teams on the engineered demolition plans for execution within the railyard.** He provided feedback on work planning efforts and **construction work plan generation to ensure safe and efficient removal of bridge elements to minimally impact all railroad operations and complete work within the absolute working windows.** Steve facilitated extensive coordination and communication of work activities within the railroad to BNSF Inspector Coordinators, SCRRA Flagmen, Railroad Project Management, and various other railroad operators to ensure that each level of stakeholders understood the work occurring within their railroad right-of-way. He also worked with project staff and design engineers to produce final RFC plans that provide efficient installation efforts to minimize operations within the rail yards. Steve managed and coordinated all subcontracted work scopes for seamless and continuous work efforts that minimally disrupted the intermodal operations, five mainline tracks, and the community.

Airport Guideway and Stations, Honolulu Authority for Rapid Transit – Honolulu, HI
Structures General Superintendent | June 2017 to December 2019

This project is the third in a series of projects to design and build the Honolulu Rail Transit Project, a 20-mile grade separated fixed guideway transit system with 21 stations. This section of the project includes 5.2-miles of elevated guideway that will extend from Aloha Stadium to the Middle Street Transit Center Station in Honolulu, Hawaii and includes four new stations. Steve was responsible for construction of all project structures (labor, equipment, and cost) including the various substructure elements (typical bents, straddle bents, hammerheads, C-Bents), and **the erection and post tensioning of the pre-cast segments using overhead gantries.** He worked with field engineers, site superintendents, foreman, and craft personnel to coordinate work, equipment allocations, and major mobilizations/demobilizations from work areas. **He managed more than ten crews (100+ personnel)** working along the entire alignment at any time across two shifts. Steve also worked extensively to develop Maintenance of Traffic (MOT) plans to execute work along the alignment which was over on- and off-ramps and adjacent to Honolulu's main Freeway/Interstate H1. The MOT plan required extensive consideration to operations such segment delivery, formwork erection, gantry launching, public safety, and maintaining traffic flows at peak traffic times. **Steve also oversaw construction of three separate trestles to facilitate the installation of drilled shafts up to 9.8-ft in diameter, which required the use of HS895 cranes and oscillating equipment for the installation of permanent and/or temporary casings over sensitive and protected waters.** He also worked with his team to ensure that milestones were met, work activities were progressed with continuity, and that all material procurement efforts coincided with the work progress respectively.

Governor Mario M. Cuomo (Tappan Zee) Bridge, New York State Thruway Authority – Tarrytown, NY
Marine/Pile Driving/Heavy Lift Superintendent | August 2013 to April 2015

The 3.1-mile long-span cable-stay bridge crosses the Hudson River, connecting Rockland County to Westchester County. Combining the use of a composite deck cable-stay structural system for the main span and long-span steel girders for the approach structures, the design achieves aesthetics without waste, has vastly improved safety features, and provides a high quality, low maintenance replacement of this critical crossing. **Steve oversaw construction of two trestles on either approach of the bridge to facilitate construction of over twelve bridge piers in shallow waters where marine equipment could not access.** The heavy-duty trestles provided access for 300-ton crawler cranes to aid in foundations, through deck construction. He was also responsible for all night shift pile driving operations for the main span and approach span piers. He managed **more than ten crews and several headings of pile installation, pile splicing, and pile clean out. Steve also oversaw maritime logistics by managing and facilitating marine equipment operations for pile installation.** Additionally, Steve coordinated and planned **material and crane barge (100+ barges in total) moves across three miles of the Hudson River and worked to minimally impact the main navigational channel.** He was also responsible for the safe installation of various sized precast tubs (300 to 550-tons) utilizing cranes of capacities ranging from 650-tons to over 1,900-tons. To perform this work, Steve worked closely with tugboat operators and engineers to ensure safe barge moves and lift execution.

University Link Light Rail Extension (U220), Sound Transit – Seattle, WA
Excavation and Bracing Superintendent | June 2010 to June 2012

This project was for a 3.15-mile extension of Sound Transit's light rail system in Seattle. Located entirely underground, it connects the University of Washington with downtown Seattle through stations at Capitol Hill and the University of Washington. The tunnels are 11,400-ft long segmentally lined twin-bored tunnels using pressurized face techniques. They have a finished internal diameter of 18 ft, 10 in. Simultaneously, 16 cross passages were excavated at intervals between the bored tunnels using sequential excavation methods. Other tasks included civil and structural work for the University of Washington Station crossover as well as permanent electrical and mechanical installations in the running tunnel and cross passages. Steve was responsible for oversight of all excavation activities, as well as craft resource management **which required considerations for the PLA.** This project interfaced directly with Stacy and Witbeck's U830 contract, on which Steve W. was Project Manager.

San Francisco Oakland Bay Bridge East Span Self-Anchored Suspension Bridge – Foundation Work, Caltrans – San Francisco, CA
General Superintendent | November 2007 to August 2009

This project was for construction of **the temporary foundations on Yerba Buena Island and the marine foundations for the temporary towers that supported the falsework for the new SAS structure.** The work consisted of two landside and four water-borne temporary bent locations. Landside bents were founded on a combination of high capacity micropiles and 60-in-diameter deep foundations and piles with follow on CIP concrete pile caps with anchor bolts to receive steel towers. There were two major components of the marine foundations: **driving frame assembly and pile driving. Pile driving included 88 42-in-diameter and 48-in-diameter open ended steel pipe pile with lengths varying between 138 and 250 ft.** Steve worked with project team members at all levels including the owner, project management, field engineering, quality and safety management, site superintendents, and craft workers to continually maintain or improve project safety, quality, production, and overall team morale. He oversaw field supervision operations and coordinated work interfaces at the site superintendent and foreman level. Steve worked with all crews to ensure that overlapping work and equipment needs continued seamlessly. **He reviewed construction documents, including safety and quality hold points and assisted in field verification and accountability by staff and craft. He also managed job wide labor, equipment, and consumable costs to ensure the project was delivered on time and on budget. He was also responsible for marine logistics, including barge and boat coordination, in the very active San Francisco Bay.**

I-10 Main Span Bridges Over Lake Pontchartrain , Louisiana Department of Transportation and Development – Slidell, LA
Marine/Pile Driving Superintendent | March 2007 to November 2007

The I-10 twin spans suffered severe damage during Hurricane Katrina and had to be temporarily repaired under emergency contracts while a completely new twin span crossing was designed, permitted, and advertised for construction. The project included 1.1 miles of new twin bridges composed of 1,056 36-in square piles, bent caps, waterline footings, columns and pier caps, 456 BT-78 precast concrete girders, structural steel main spans, and a poured-in-place deck. The project was completed on schedule and budget. **Steve was responsible for driving 36-in square concrete piles, and installation of cast in place concrete seal slabs. He also oversaw marine logistics at the construction yard including loading and unloading of equipment off the water.**

JARED CARLSON, PE | DEPUTY CONSTRUCTION MANAGER – LONG SPAN

2.5 YEARS WITH STACY AND WITBECK | **15 YEARS IN THE INDUSTRY**

RESPONSIBILITY ON THE PROJECT

Jared will be responsible for working with Dan R., Fabrication Manager Josh Ishibashi, the movable bridge team, and Darren to plan for the demolition of the long span. He will also take an active role in coordinating with stakeholders like UPRR, ODOT, and businesses to communicate construction plans, coordinate schedules, and accommodate considerations into the overall project plan. Jared will apply his experience with complex temporary works to the plan and execution of the Project's temporary systems. Jared will also be a critical to the evaluation of the long span bridge type and presentation of our team's suggested approach. During construction, Jared will work with Steve C., Jennifer, and Faye to ensure work, both self-performed and subcontracted is performed safely and with high levels of quality. Jared has been dedicated full-time to the development of the pursuit of this project since March.

EDUCATION

B.S., Civil Engineering, University of Pittsburgh – Pittsburgh, PA

CERTIFICATIONS AND TRAININGS

- Registered PE, PA
- OSHA 30-Hour
- Envision Sustainability Professional
- Roadway Worker Protection (Railroad)
- HAZWOPER 40-Hour For All Industries
- Aid/CPR/AED

WORK HISTORY

Jared is a structures manager with strong technical knowledge, analytical skills, and project management experience. His combination of technical understanding and detailed approach allows him to develop a thorough understanding of each project and set production goals to allow projects to meet or beat schedule expectations. Jared's vast experience constructing all types of structures and conscientious nature also allows him to integrate quality control practices into daily tasks, ensuring that work is built correctly, and that all documentation is complete and organized. Jared is a natural leader, and excels at mentoring the engineers, subcontractors, and craft that work for him. Jared began his career with AB before joining Stacy and Witbeck. He has strong relationships throughout the Project team which have already fostered excellent joint venture teamwork, innovation, and partnership.

RELEVANT EXPERIENCE

Brightline Zone 4, Brightline Trains Florida LLC – Cocoa to West Palm Beach, FL
Structures Manager | November 2020 to March 2023

This is an $878 million project for the construction for numerous bridges over water to support 129 miles of high-speed rail from Cocoa to West Palm Beach. The work included replacement of 19 existing bridges with 28 new bridges. **The project schedule is aggressive. Jared manages the structures scope for the Zone 4 project, comprising 28 bridges and 30 walls, valued at $100 million.** The planning, coordinating, and scheduling of the work in an active rail corridor with narrow and restrictive access points was particularly challenging and increased the overall complexity of the project. Additionally, several of the bridges were on the critical path for the duration of the project. **Jared worked with the client, the railroad, the subcontractor, and with crews to implore time-saving activities, such as robotic, remote monitoring of the existing bridge structures, adding critical time to the work windows for the bridge crews.** Additionally, he worked with the subcontractor to develop detailed plans to work over the active railroad and set increasingly aggressive production goals to keep these bridges on schedule.

Brightline Zone 3, Brightline Florida, LLC – Orlando to Cocoa, FL
Schedule Manager | December 2022 to March 2023

This is a dedicated track installation subcontract valued at $27 million. Stacy and Witbeck constructed 42 miles of new track. Most of the 35-mile rail corridor is single track with a seven-mile segment of double track. To build this higher-speed Class 6 and 7 track, crews installed 456,000-lf of continuous welded rail, 114,450 concrete ties, and over 300,000 tons of ballast. The project also included the installation of a No. 32 turnout; this is one of only two No. 32 turnouts in the U.S. **Jared managed the CPM schedule for the project team. This consisted of gathering production progress data, making schedule logic adjustments to suit changes in the field, and submittal preparation on a monthly basis.**

US 35/I-64 – Nitro I/C Design-Build Project, WVDOT, Division of Highways – Nitro, WV
Project Manager | February 2020 to November 2020

This was a design-build project near Charleston, West Virginia to widen I-64 from four to six lanes for approximately 3.8 miles. The work included bridge replacements, new interchange configuration, **a new bridge structure over the Kanawha River, total replacement of the existing truss bridge over the Kanawha River,** pavement widening and roadway construction. **Jared managed the design development and construction of the structural elements of the project.** This consisted of running weekly design management meetings and drawing reviews, construction method development, procurement, fabrication, planning and field installation of the above noted roadway and structures. Responsibilities also included several supply agreements and subcontracts of up to $25 million in value.

Washington State Convention Center Addition Project, Washington State Convention Center – Seattle, WA
Project Manager | November 2018 to January 2020
The project included construction of a new ballroom, flex space with an outdoor terrace, and a new exhibit hall. The addition, named the Summit, is a 14-story structure that will provide views of the Puget Sound and surrounding city. Construction included a podium to house future development in the area. **Jared managed a staff of 40 individuals working on the procurement, fabrication, planning, and field installation of the above noted components of the structure.** This included several supply agreements and subcontracts up to $40 million in value and management of a site team of over 100 ironworkers and operators.

I-90 Floating Bridges Anchor Replacement Project, WSDOT – Seattle, WA
Project Manager | November 2017 to October 2018
This WSDOT project consisted of the replacement of **32 existing 2-3/8" structural anchor cables linking the two I-90 floating bridges,** Lacey V. Murrow Memorial Bridge (LVM) and the Homer M. Hadley Memorial Bridge (HMH), down to various anchor types located on the bottom of Lake Washington. The LVM Bridge and the HMH Bridge are the world's second and fifth longest floating bridges with overall lengths of 6,620 ft and 5,811 ft, respectively. **Jared managed a team of two engineers and a peak of 30 pile drivers as well as two specialty diving subcontractors during the site portion of the contract.** This project was particularly challenging due to a large number of changed conditions, changes in character, and plan errors with a high degree of technical difficulty. **Overcoming these challenges required real-time problem solving that was successfully managed, resulting in an on-time completion and a highly satisfied client.**

Edmonton Valley Light Rail Tawatina Bridge, Edmonton Transit Service – Edmonton, Alberta, Canada
Project Engineer | September 2017 to October 2017
This new 16.7 mile rail route in Alberta, Canada stretches from Mill Woods to downtown Edmonton to Lewis Farms and carries about 100,000 daily commuters. Scope included the demolition of the existing Cloverdale pedestrian bridge and construction of the Tawatina Bridge. The bridge consisted of an 853-ft, three-span extradosed cable-stay bridge and pedestrian walkway over the North Saskatchewan River, with seven stay cables running through each leg of the pylons. The cables utilize a saddle system and each cable has 40 strands. Over 13,670 tons of concrete were used for the construction of the bridge. **Jared contributed to the development of the temporary works structures used to construct the new bridge, specifically through a constructability review of the deck formwork gantry and an independent check of the falsework tower design.**

Queensferry Crossing, Transport Scotland – Edinburgh, Scotland
Field Engineer/Project Engineer | May 2010 to December 2016
This project replaced a 3.7-mile segment of the A-90 Motorway over the Firth of Forth near Edinburgh, Scotland. Approximately 1.6 miles of this replacement represents a major bridge crossing of two ocean shipping and military navigation channels. This bridge structure has an overall length of 8,638 ft, including a cable supported structure of 6,627 ft. The two main navigation spans are 2,132 ft each. The bridge has 14 spans, three concrete towers in the center of the transverse cross section up to 689-ft in height, two planes of stay cables that anchor in the center of the structure and a composite steel tub/concrete deck superstructure. **Jared held several roles during the assignment, including the management of approximately $45 million of work and assisting in developing the major temporary works systems and construction methods for the main crossing bridge.** He was responsible for coordination of the excavation and fill operations, as well as construction of the site access ramps as part of the site preparation. **Jared was involved in planning and management of all facets of site assembly and launch of the 6,500-ton North Approach Viaduct (AVN). This included 1,000 ton of temporary steelwork, a kingpost stay cable system installed with two 600-ton strand jacks, a launching system consisting of two 300 ton strand jacks, a 120 ton capacity rail mounted gantry crane, 98-ft by 65-ft by 40-ft rail mounted welding shelters, and complex hydraulic systems with more than 108 individual jacks.**

The Las Vegas High Roller, Caesars Entertainment – Las Vegas, NV
Field Engineer | January 2011 to May 2011
The Las Vegas High Roller (LVHR) is a major element of the new $550 million open-air retail, dining, and entertainment district in Las Vegas. The LVHR was a record-braking 550-ft observation wheel with 28 observation cars that enable up to 40 passengers in each car to get a panoramic view of the entire Las Vegas Valley. The LVHR structure consists of a rim, a rotating hub and fixed spindle, four support legs, and one braced leg. The rim is 469 ft in diameter and was assembled from 28 segments that are bolted together. The rim is connected to the hub by 112 cable spokes made from 75mm diameter locked coil cables. The tension in these cables forces the rim to maintain its shape and keep the entire circular steel structure in compression as the rim and hub rotate around a fixed spindle on two main wheel bearings. The spindle sits 285 ft above ground and it is mounted at each end to a pair of support legs. The east end of the spindle is also supported by a braced leg which stiffens the structure in the transverse direction. During the tender phase, **Jared developed the construction methodology and temporary works designs required to assemble the structural steel and radial cables in the upright position.**

1.1.4 PROPOSER EXPERIENCE

EXPERIENCE AS PRIME CONTRACTOR

BBP brings together the industry's most experienced bridge builders and premier CM/GC contractors. Our team's history and experience dates back to the original Burnside Bridge, which was fabricated by AB. In the nearly 100 years since, our team's partners have built movable, long span, and technically complex bridge and infrastructure projects around the globe and are eager to apply these lessons learned, best practices, and industry-leading collaborative approaches to this essential project in our community.

Our team's experience in the last 50 years includes:

- **57** CM/GC Projects
- **124** Movable Bridges Built/Modified
- **87** Projects Delivered in Portland
- **1,300** Bridges Built
- **48+** Projects with ODOT Interface
- **30+** Projects with UPRR Interface
- **20+** Projects with/for CoP Parks and Recreation

In the following pages, we will demonstrate our experience on recent, relevant movable bridge and long span projects, all of which include participation from our team's personnel. Not only do these projects demonstrate our team's ability to solve technically complex project challenges, but also deliver on commitments made to stakeholders, collaborate with clients, minimize impacts on the community, develop small, local, and minority businesses, and positively impact local workforces. In addition to the reference projects found on the following pages, our experience also includes the following highlights.

GOV. MARIO M. CUOMO (TAPPAN ZEE) BRIDGE

$3.5 BILLION | 3.1-MILE-LONG BRIDGE

JOINT VENTURE OF TRAYLOR AND AB | Tappan Zee was a technically complex cable-stay bridge that featured many of the same challenges expected on the Project's long span. Dan R., Steve C., Project Engineer/Sustainability Champion Rebecca Hastings, and Project Sponsor Neil Napolitano collaborated in the delivery of this project.

US 11: LAKE PONTCHATRAIN MOVABLE BRIDGE REPLACEMENT

$34.7 MILLION | BASCULE BRIDGE REPLACEMENT

AB | This was a project to replace and repair the hydraulically-actuated bascule leaf. John S. was responsible for providing construction support to AB's team self-performing the machinery replacement and repairs, installing and aligning the new drive machinery including motors, trunnion hubs and bushings, hydraulic piston drive units, tail locks, and more.

MAX RED LINE PROJECT

$143 MILLION | LIGHT RAIL EXPANSION PROJECT

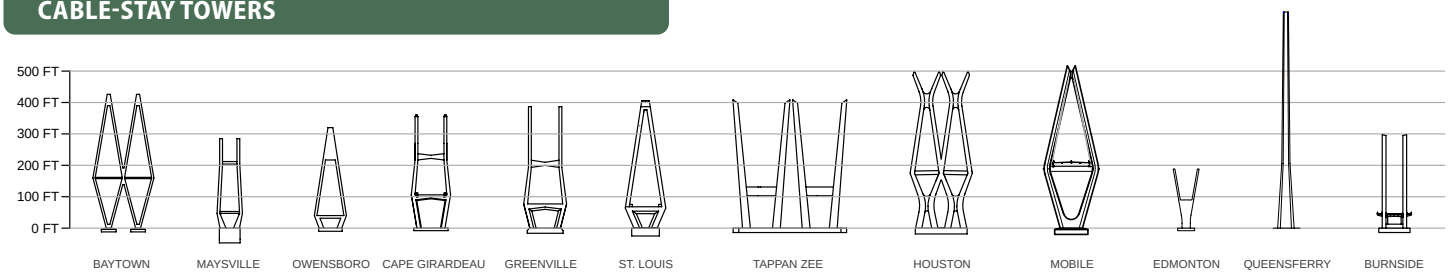
STACY AND WITBECK | This CM/GC project in Portland is to improve TriMet's Red Line system and includes a 475 ft long bridge over UPRR and I-84. The team, including Jim, Steve W., John B., and Faye, worked with UPRR to identify naturally occurring work windows to minimize flagging needs and increase overall project efficiency.

MID-COAST CORRIDOR PROJECTS

$1.5 BILLION, CM/GC PROGRAM WITH FOUR MILES OF AERIAL VIADUCT

STACY AND WITBECK | This CM/GC project, led by Stacy and Witbeck, has been celebrated in the industry for its successful achievement of broad project goals and excellence in project partnering. The team, including Jim and John B., addressed many similar challenges as those anticipated on the Project, including freight coordination, stakeholder relationships, dense urban areas, DOT coordination, strict environmental requirements, and complex utilities.

CABLE-STAY TOWERS



VARIOUS PROJECTS

TRAYLOR AND AB | BBP's experience includes cable-stay towers of similar height, width, and complexity as expected on the Project.

MOVABLE BRIDGE PROJECT NO. 1 | WOODROW WILSON BRIDGE BASCULE SPANS AND MARYLAND APPROACHES – WASHINGTON, D.C.

PROJECT SIMILARITIES

- ✓ 3,881-ft twin bridges with 270-ft bascule span
- ✓ Safe, high-quality delivery
- ✓ Drilled shaft foundations and deep driven pile for falsework foundations
- ✓ Strategic demolition of existing bridge with no adverse impacts
- ✓ Major traffic control efforts
- ✓ Key personnel involvement
- ✓ Underwater electrical cable
- ✓ Project Labor Agreement

2. References: Russel Fuhrman, Executive Project Manager, Woodrow Wilson Replacement Project, 571-236-2423, russfuhrman@gmail.com

Brian J. Mileo, PD, Principal Hardesty & Hanover, 646-745-7554, bmileo@hardestyhanover.com

12. Key Personnel: John Schober, Movable Bridge Specialist, Feb. 2005 to Apr. 2007

6. Original Contract Value: $387.7 million
7. Final Contract Value: $411 million | Owner initiated for design modifications to the bascule, machinery, operator's house, and unforeseen foundation conditions. **8. Liquidated Damages/Other Penalties:** None **9. Claims:** None **10. Original Completion Date:** Dec. 2008 **11. Actual Completion Date:** Dec. 2008 **13. OSHA Citations:** None
14. Incidents: None

4. Description: AB led joint ventures in two contracts to build the superstructure of this replacement bridge over the Potomac River. The contracts encompassed the demolition of the existing bridge and the construction of twin 22-span bridges aggregating 3,881 ft, **including the 270-ft long eight-leaf trunnion bascule span at the navigational channel.** The approaches were concrete deck arch construction with complex, cast-in-place concrete segmental, precast concrete segmental, and structural steel components. The parallel structures consisted of inner and outer loop bridges that were constructed adjacent to the existing bridge while maintaining traffic. The outer loop was constructed first, traffic was rerouted to the new bridge to allow demolition of the old, and then the inner loop was completed. The contract included the fabrication and installation of all operating machinery, including racks, pinions, primary and auxiliary motors, primary and secondary reducers, bearings, trunnions, span locks, and electrical controls as well as construction of the operator's house.

5. DBE/Small Business Goals: Goal DBE: 17% **Percentage Achieved:** 17.1%

15. Project Delivery Method: Design-bid-build | **Strategy 1: Formal Partnering** | The project was part of a major multi-billion-dollar corridor improvement with multiple DOT oversights and several design consultants. To manage these risks and improve communication, AB, FHWA, and the Maryland DOT implemented a formal partnering process. The process was the first of its kind and included a written charter, monthly meetings, and a rating system to measure the responsiveness of submittal reviews, environmental compliance, and community coordination.

Strategy 2: Co-Location | Temporary offices were constructed for the client and the construction team. The relationship built between the teams resulted in the recommendation and election of AB's Operations Manager for the National Academy of Construction for "exemplary leadership in the construction industry with a focus on the construction of state-of-the-art signature bridges."

Strategy 3: Task Forces | With multiple design firms working together and reviewing AB's construction work plans, AB established task forces that consisted of the client representatives, design team members, and AB engineering. The task forces included stakeholders when applicable, and the process resulted in efficient reviews of submittals, timely approvals of work plans, and reduced schedule risk.

16. Controlling/Reducing Costs: Example 1: Accelerated Bridge Construction | The project delivery method was design-bid-build, and the AB team used accelerated bridge construction to provide the lowest cost to the owner. These methods included using precast concrete for the foundation elements and preassembling large segments of the bascule bridge equipment and structural steel, which reduced navigation channel impacts.

Example 2: Precast Concrete Elements | To control costs, the precast concrete elements were fabricated using in-house engineering and self-performed in a purpose-built casting yard adjacent to the site. The team was integrated with the client's engineering, quality, and oversight to expedite construction.

Example 3: Bascule Bridge Subassemblies | To minimize impacts on the navigable channel with very restricted work windows, **AB designed and fabricated a heavy-lift gantry crane to lift 600-ton bascule girder assemblies.** The construction work plans were coordinated with the client's team, for U.S. Coast Guard approval, which was achieved without major comments or delays, in large part due to AB's plan, which minimized the closure time and space needed to less than what was assumed in the NEPA process.

Example 4: Stick-Built Construction | In locations where navigation channel restrictions were less stringent and to reduce schedule pressure on the fabricators, AB and the client collaborated on construction work plans that used "stick build" (small assemblies and individual pieces) rather than large subassemblies. In this case, the method was less costly and reduced schedule risk because the smaller pieces could be shipped just in time from the fabricator rather than waiting for large assemblies to be completed.

Example 5: Self-Performance | Capitalizing on AB's legacy of steel fabrication, manufacturing, and movable bridge experience, **AB self-performed the machinery installation using millwrights and ironworkers** and fabricated the bascule towers in-house. The approvals for the work required close collaboration and approval from the client's team.

MOVABLE BRIDGE PROJECT NO. 2 | THIRD STREET BRIDGE REHABILITATION PROJECT – SAN FRANCISCO, CA

PROJECT SIMILARITIES

- ✓ 195-ft bascule bridge
- ✓ Safe, high-quality delivery
- ✓ DBE program
- ✓ Transparent, open book estimating
- ✓ Major traffic control efforts
- ✓ Key personnel involvement

4. Description: The Third Street Bridge is a **195-ft long, 80-ft wide bascule bridge with five lanes of traffic and pedestrian walkways.** The bridge remained open during construction with lane closures and limited full closures. As the Prime Contractor, AB's scope covered extensive rehabilitation, cleaning and painting, fender system and substructure repair, and mechanical, electrical, and control repairs associated with bridge operations all while limiting impacts to traffic. The project received multiple awards, including the **2021 International Partnering Institute Partnered Project of the Year – Ruby Level.**

5. DBE/Small Business Goals: **DBE Goal:** 11% **Percentage Achieved:** 11.6%

15. Project Delivery Method: Design-bid-build | **Strategy 1: Open Book Approaches** | Although this was a hard bid project, an open book approach was taken to collaborate with the City for resolution of issues. AB's full estimate and cost records were reviewed with the client to develop trust and reach an agreement.

Strategy 2: Initial Partnering Session | At the initial partnering session, a broad range of project-specific goals were established. These goals included administrative goals, such as satisfying the conditions to maintain federal funding and public access goals, including minimizing the impact of the project on commuters, residents, and neighboring stakeholders.

Strategy 3: Open Conversation and Adjustments | At the follow-up partnering meetings, the goals were assessed, challenges identified, and resolutions implemented. This process revealed disparities between AB and the City. To resolve this, both parties committed to accelerating the project and providing additional resources. This brought about the assignment of additional supervision staff by both parties. The City appointed an experienced engineer to liaise with AB's Construction Manager on-site. The two met daily to identify issues and put resources in place to prevent any delays and attended stakeholder meetings together to communicate the schedule and address concerns.

16. Controlling/Reducing Costs: **Example 1: Resequencing of Work** | Some major issues during the first phase of construction caused the project to become at risk of being delayed. Working with the City, AB developed a recovery schedule that preserved the project cost by ensuring the project was completed before a second rainy season, which mitigated $8.4 million of potential delays.

2. References: Thomas Roitman, SE, PMP, Project Manager, San Francisco Department of Public Works, 415-297-0736, thomas.roitman@sfdpw.org

Jin Zhao, Construction Manager, San Francisco Department of Public Works, 628-271-2171, jin.zhao@sfdpw.org

12. Key Personnel: Dan Raynor, Operations Manager, Mar. 2017 to Jul. 2022 | Jene Van Zant, Area Manager/ Pre-Construction Manager, Mar. 2017 to Jul. 2022

6. Original Contract Value: $23.9 million **7. Final Contract Value:** $27.5 million | The owner's initial budget was $29,523,525. The owner used the bid time savings to add scope, including additional truss strengthening and rehabilitation items, and to accelerate construction to limit impacts to stakeholders.
8. Liquidated Damages/Other Penalties: None
9. Claims: None **10. Original Completion Date:** Mar. 2020 **11. Actual Completion Date:** Mar. 2020
13. OSHA Citations: None **14. Incidents:** None

Example 2: Trade Partnerships | During the bidding phase, AB collaborated with the painting subcontractor to develop a common access plan that reduced risk for both parties and eliminated duplicated scope. Typically, the general contractor would provide shared access and both parties would carry contingency for specialty access. However, in this case, the painting subcontractor was able to provide common access using readily available materials. This resulted in a lower bid and significant cost savings of $8.3 million.

Example 3: Early Communication with Key Stakeholders | Prior to the start of construction, AB accompanied the City at stakeholder meetings to present the public information plan. Notices were subsequently sent out to the public to inform them of construction activities and phase changes such as nighttime work and closures. This engagement removed obstructions to the work sequence as well as mitigated potential shutdowns. The early communication allowed all team members to work together. Cost control was realized in the ability to obtain permits and mobilize on schedule.

Similar to the CSO Force Main on the EQRB Project, this project had a major water main adjacent to the bridge's abutment. Unforeseen emergency repairs on the main required the City to restrict access to the west side of the bridge AB worked with the City to adjust the access plan while allowing work to continue. The water main caused further issues due to the congestion of other utilities near the bridge, which limited the placement of the heavy equipment needed to perform the bridge repair work and paint remediation. AB worked with the City to modify the access plan and put protection plates in place to ensure that the equipment didn't damage adjacent utilities. We will apply these lessons learned to the Project.

MOVABLE BRIDGE PROJECT NO. 3 | PORTLAND STREETCAR LOOP – PORTLAND, OR

PROJECT SIMILARITIES

- ✓ Modifications to bascule spans and counterweights
- ✓ CM/GC project
- ✓ Multnomah County, UPRR, ODOT, TriMet, and CoP coordination
- ✓ Extensive DBE program
- ✓ Early work packages
- ✓ Transparent, open book estimating
- ✓ Major traffic control efforts
- ✓ Complex utility relocations
- ✓ Key personnel involvement

4. Description: This CM/GC project featured a six-mile extension to Portland's streetcar system. As CM/GC, Stacy and Witbeck was responsible for complex modifications to the existing streetcar system, **extensive structural modifications to the nearly 100-year-old landmark bascule-style Broadway Bridge, an 860-lf bridge over an active UPRR corridor,** changes to traffic signals and lighting, major public and private utility work, and a maintenance facility.

5. DBE/Small Business Goals: DBE Goal: 16% **Percentage Achieved:** 18.8%, Gender and diversity goals were also exceeded

15. Project Delivery Method: CM/GC | **Strategy 1: Project-First Approach** | This project included many of the same stakeholders as those on the Earthquake Ready Burnside Bridge project. Steve worked with the CoP and stakeholders early in pre-construction to establish the Project-First approach. This included early meetings to align expectations with UPRR, TriMet, ODOT, and the CoP's Water, Sewer, and Traffic Bureaus. During construction, project coordination included daily game plan meetings with client and stakeholder representatives to discuss upcoming work.

Strategy 2: Accommodation of Nearby Projects | Coordination with other ongoing projects along the alignment was required, while maintaining continuous access to the area for residents and businesses. The team installed a temporary waterline to allow continuous operations of a tunnel boring machine on an adjacent project where an uninterrupted water supply was critical to the 24-hour tunnel boring activities. The City's Burnside-Couch couplet project bisected the project at the peak of in-street work. The team coordinated daily for items like dual traffic control staging, concrete placements, and intersection crossings during weekend shutdowns. Special attention to maintaining business access was required where concurrent activities on adjacent projects occurred.

Strategy 3: Environmental Compliance | Steve and the project team worked diligently to identify and incorporate sustainable approaches into the project's construction, which was important for bridge modifications such as lead abatement and repainting. The sewer work in the Pearl District was performed in a known, highly contaminated soil area requiring respirators and 40-hour Hazardous Material training, along with off-site disposal at an approved dumpsite. These activities required close coordination with the CoP's Bureau of Environmental Services and Oregon Department of Environmental Quality. **The project was awarded the USDOT Excellence in Air Quality Improvement and Global Climate Change Award for their contributions.**

2. References: Kim Knox, Senior Project Manager, Shiels Obletz Johnsen (CoP CM), 503-242-0084, knox@sojpdx.com

Mark Dorn, former Director of Transit Planning and Project Delivery, AECOM, current Executive Director Planning, Engineering, and Construction, TriMet, 503-222-7200, dornm@trimet.org

12. Key Personnel: Jim Abramson, Project Sponsor, Jul. 2009 to Sept. 2010 | Steve Wood, Project Manager, Mar. 2009 to Dec. 2011 | Faye Burch, DBE and Workforce Coordinator, Jul. 2009 to Sept. 2010 | Added Value: Paul Pletcher, Julie Greb, Inna Mishchuk, and Brandi Lisle

6. Original Contract Value: $104 million
7. Final Contract Value: $108 million | The net budget growth was a result of owner-directed changes for major items, quantity over and under runs, and subcontractor procurement and material buyout savings.
8. Liquidated Damages/Other Penalties: None
9. Claims: None **10. Original Completion Date:** Dec. 2011 **11. Actual Completion Date:** Dec. 2011
13. OSHA Citations: None **14. Incidents:** None

16. Controlling/Reducing Costs: Example 1: Collaboration on Bascule Bridge Scopes | A major challenge was the track and OCS construction across the bascule spans due to the additional weight of the track slab, the OCS connections, and accommodations to allow bridge movements. Due to the age and complex motion of the bridge, a "net zero" weight adjustment of the lift section was mandated. **The team worked closely with Agency engineers to devise weight reducing measures including replacing the bridge deck with fiber reinforced plastic and replacing old steel members with lighter high grade steel to offset added loads. Adding to the complexity of the work, the bascule span had to be available to be opened every three days to accommodate shipping traffic.** This required the work to be constructed to a "temporarily complete" state every three days. Stacy and Witbeck worked closely with the U.S. Coast Guard and bridge operations to schedule the lifts.

Example 2: Controlling Cost and Maximizing DBE Participation | As part of the DBE contracting plan, Steve W. and Faye conducted outreach to create a competitive pool of well-vetted DBE subcontractors. The team consistently provided the client with several subcontractor quotes for each scope of work, including for the 11,000-sf vehicle maintenance facility. The facility was constructed with over 66% DBE subcontractors and well-within the CoP's budget.

Example 3: Third-Party Quality Oversight | Stacy and Witbeck carried out all quality control aspects of the project. The bulk of the QC functions were subcontracted to a third party managed by Stacy and Witbeck. This added second set of eyes on key aspects of work, providing further checks and balances. This subcontractor worked directly with the CoP who served in the role of QA. The relationship was very healthy which resulted in a small number of NCRs, a strong quality culture, and minimal rework on the project.

LONG SPAN BRIDGE PROJECT NO. 1 | QUEENSFERRY CROSSING – EDINBURGH, SCOTLAND

PROJECT SIMILARITIES

- ✓ 8,638.5-ft bridge with a 6,627-ft cable-stay span
- ✓ Safe, high-quality delivery
- ✓ Drilled shaft and pile foundations
- ✓ Innovative construction staging to minimize impacts on users
- ✓ Complex utility relocations
- ✓ Major traffic control efforts
- ✓ Design-build procurement with innovations during pre-construction to minimize risk to cost and schedule
- ✓ Key personnel involvement
- ✓ Management of 150+ stakeholders
- ✓ Construction over existing, sensitive cultural sites and buildings

4. Description: AB was the design-builder for the Queensferry Crossing, which consists of a new major bridge and numerous ancillary structures and roadways. Approximately 1.6 miles of this new roadway includes a **6,856-ft cable-supported structure with two, 2,132-ft main navigation spans. The bridge has 14 spans, three concrete towers in the center of the transverse cross-section up to 688-ft high, two planes of stay cables anchored in the center of the structure, and a composite steel tub/concrete deck superstructure.**

5. DBE/Small Business Goals: The owner had no DBE or small business utilization goals. The team made efforts to conduct outreach, coordination, and hiring of smaller, local firms.

15. Project Delivery Method: Design-build | **Strategy 1: Formal Partnering** | The initial partnering included an alignment of the management staff and resulted in a formal charter and risk matrix alignment and allocation.

Strategy 2: Co-Location | To improve communication with the client and design team, AB's team built a co-located office near of the bridge. The office served as a hub for all operations including housing the owner, communications, operations, quality, design, and safety groups. The buildings were organized by functional units and areas of work, not by company. This facilitation an additional collaboration tool, Working Groups, discussed below.

Strategy 3: Working Groups | As we suggest for the Project, AB organized working groups with discipline specific, but interconnected goals. One example of a working group included the technical working group. The team managed the design review process and worked through multiple challenges. One challenge was the design of the orthotropic box girders when a flaw was identified in the design calculations after early steel orders had already been made. The group worked together to implement a recovery plan that included the design team updating drawings and calculations in parallel with the fabrication management team working with the fabricators to reallocate preordered material to other areas of the work. In all, the groups were able to reallocate approximately 4,000 tons of material for reuse without affecting the overall schedule or cost.

16. Controlling/Reducing Costs: Example 1: Value Engineering | The team vetted VE ideas with the owner and design team, including the re-design of the foundations using caissons rather than drilled shafts, raising the central tower to reduce rock excavation, steel design to include launching reinforcement, substitution of the embankment for structures in the approach roadways, and global sourcing and procurement of materials. **As a result, the team was able to return over $300 million to the owner.**

Example 2: Third-Party Coordination | The owner had met with many of the 150 identified stakeholders and had obtained preliminary commitments. However, AB's team was responsible obtaining final clearance from all stakeholders, who ranged from local government, military, and utilities to community groups, environmental agencies, and historic preservation requirements. A significant challenge involved a 100-year-old British Petroleum (BP) oil pipeline. BP would not sign off on the design, citing concerns over settlement of the pipeline. To gain approval, the team and owner brought the parties together for brainstorming sessions and developed an alternative that met BP-defined settlement criteria and efficiently managed schedule and budget risks.

Example 3: Integrated Shop Drawings | The design of the main bridge included a congested interface between the tower and deck segments including congested reinforcement, post tensioning, ladder access, structural health monitoring equipment, and equipment for maintenance elevators. The team used 3D modeling and the integrated shop drawing process developed on other AB projects. The system was implemented with clash detection and solutions were vetted with the owner and design team. In all the team was able to identify and eliminate most issues during pre-construction.

Example 4: Material Sourcing Plan and Fabrication Management | At the time of construction, the project was the largest infrastructure project in Europe which created a large risk of overloading the steel fabrication and concrete supply markets. AB carefully sourced materials from various fabricators across the globe and invested in on-site concrete batch plant operations. For example, when a local fabricator was unable to meet the demands for fabrication, the team was able to source material from other suppliers. AB used relationships established during the San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span (SAS) with the other supplier to meet necessary quality standards and communication protocols.

Example 5: Co-Location of Quality Control, Assurance, and Verification | Quality control and assurance was the responsibility of AB (QC) and the design team (QA). The owner provided quality verification and auditing (QV). The large portion of fabrication occurring overseas was identified as a major risk. To address this with the intent to accept material prior to shipment, the team co-located at key fabrication facilities. The team successfully accepted all the 50,000 tons of steel fabricated off-site. The on-site quality teams were also co-located expediting approvals, reviews, and efficient resolution of issues. **Proposed Fabrication Manager Josh Ishibashi was essential to this effort.**

2. References: Lawrence Shackman, Director of Major Projects, +44 7946-540-833, lawrence.shackman@transport.gov.scot

Richard Hornby, Transport Scotland, ARUP (owner's engineer), +44 7899-060-588 richard.hornby@arup.com

12. Key Personnel

Dan Raynor, Construction Manager/Permanent Design, Jul. 2011 to Nov. 2013 | John Schober, Estimator, Jan. 2010 to Mar. 2011 | Jared Carlson, Field Engineer/ Project Engineer, May 2010 to Dec. 2016 | Added Value: Josh Ishibashi

6. Original Contract Value: $1.26 billion
7. Final Contract Value: $1.294 billion | The variation in construction contract value was the result of owner-initiated changes for their requested acceleration of the project schedule. **8. Liquidated Damages/Other Penalties:** None **9. Claims:** None **10. Original Completion Date:** Aug. 2017 **11. Actual Completion Date:** Sept. 2020 | The contractual completion date was extended by the owner. The JV worked closely with the client to develop acceleration methods that helped to bring the project in on-schedule, despite additional scope. **13. OSHA Citations:** The presiding safety organization was the UK Health and Safety Executive and therefore does not produce equivalent statistics, however no citations, fines, or penalties were issued on the project. **14. Incidents:** A subcontractor on the project experienced an employee fatality.

LONG SPAN BRIDGE PROJECT NO. 2 | HUEY P. LONG BRIDGE MAIN SPAN SUPERSTRUCTURE – JEFFERSON PARISH, LA

PROJECT SIMILARITIES

- ✓ 2,300-ft long main span bridge
- ✓ Safe, high-quality delivery
- ✓ Railroad coordination
- ✓ U.S. Coast Guard coordination
- ✓ Complex utility coordination
- ✓ Seismic design considerations
- ✓ Bridge over navigable waterway
- ✓ Early work packages
- ✓ Major traffic control efforts

4. Description: The Huey P. Long Bridge Widening was a four-phase project vital to the recovery of Greater New Orleans after Hurricane Katrina on which Traylor was the prime contractor. This phase of the project consisted of 0.451 miles of a cantilever truss highway and railroad bridge widening with parallel trusses and steel stringers for a widened roadway deck system. The existing bridge was retrofitted in order to be connected to the 17,500 tons of new steel and the existing rivets were replaced with high-strength permanent bolts. The project was completed on budget and ahead of schedule, resulting in numerous awards, including the **2012 Construction Innovation Forum NOVA Award, the 2013 AGC Alliant Build America Award, and the 2013 AGC Alliant Build America Grand Award.**

5. DBE/Small Business Goals: N/A – Traylor exceeded the project requirement to hire at least 80% Louisiana residents, and although there were no formal workforce diversity goals, Traylor employed a 5% female and 68% minority workforce.

2. References: Brian Buckel (formerly with LADOTD as District Construction Engineer), 504-214-4898, bbuckel@gecinc.com

Stephen Spohrer (formerly with LADOTD as Program Director), 225-573-1033, sspohrer@gecinc.com

12. Key Personnel: Added Value: C. John Meagher

6. Original Contract Value: $452.6 million **7. Final Contract Value:** $454 million | The owner amended the contract to accommodate scope revisions. Traylor completed the project within the allotted contract budget. **8. Liquidated Damages/Other Penalties:** None **9. Claims:** None **10. Original Completion Date:** Aug. 2012 **11. Actual Completion Date:** Apr. 2012 | The project was opened to traffic four months ahead of schedule. **13. OSHA Citations:** None **14. Incidents:** None

15. Project Delivery Method: Design-Bid-Build | **Strategy 1: Coordination with Project Stakeholders** | Although the project was built using a traditional design-bid-build contract, the complexities of retrofitting and widening the structure while maintaining road, train, and ship traffic required a tremendous amount of **collaboration between Traylor, the owner, the designer (Modjeski & Masters), the public, the railroad, the U.S. Coast Guard, and owner's project manager.** The owner was under significant pressure to reduce the number and duration of navigation channel and total river closures, as well as vehicle closures. Traylor engaged all parties to develop a solution to support this using a span-by-span erection method. This revised plan required collaborative input from all parties and approval from the U.S. Coast Guard. Traylor built the new trusses on barges at the shore, floated them into place directly underneath the bridge during a total river closure, and erected them simultaneously with strand jacks. Instead of delaying bridge and marine traffic during hundreds of critical lifts, Traylor's scheme required only three critical lifts.

Strategy 2: Installation of Containment Structures | The project also required the removal and replacement of over 67,000 rivets, as well as adding reinforcement plates and various attachments to the new structure. One of the innovations the team developed was a movable tunnel/shielding system that allowed vehicle traffic to flow beneath. The team used the shielding system when removing hazardous materials, mainly lead paint, from the bridge. Underdeck platforms, vacuums, and housekeeping were all paramount to keeping the project safe and on schedule.

Strategy 3: Maintaining Quality Hold Points | Traylor also worked together with the owner's representatives to maintain high-quality standards at the fabrication plant. Together the team implemented a proactive approach to quality that included having full time QC inspectors and engineers observe all operations at the fabrication plant. One specific issue mitigated involved the eye bars that support the main structure at the cantilever sections which were required to be line bored and match marked. The eye bars had been taken out of the bundles and assembled back to their original line boring sequence. Traylor's on-site inspector caught this mistake prior to the bundles leaving the plant. While this caused delays at the fabrication plant, upon delivery, the crews performed installation in the field without incident and delivered this work on schedule.

16. Controlling/Reducing Costs: **Example 1: Innovative Means and Methods** | Traylor's innovative erection method allowed simultaneous erection of multiple trusses to minimize river, rail, and vehicular traffic closures and completed the project on budget and ahead of schedule.

Example 2: Steel Fabrication Shop Contingency Plans | The team mitigated supply delays and cost overruns by identifying multiple steel fabricators. Traylor placed engineering and quality control staff in the plant to document and mitigate fabrication issues before impacts were realized.

Example 3: Overcoming a Labor Shortage | Because the project is located in a non-Union area, a major challenge was the capability and experience of the local workforce. To mitigate the risk, Traylor used an on-the-job apprentice training program to grow the local labor force and deliver the project early.

Example 4: Coordination with Adjacent Contractors | Traylor held frequent coordination meetings with an adjacent contractor to mitigate traffic congestion and delivery challenges by coordinating key dates for concrete pours.

Example 5: Operational Efficiencies | To reduce costs in the next phase of the project, Traylor used the permanent metal barrier in the temporary median position, then crews installed permanent barriers and switched traffic to remove the existing deck and retrofit on top of the floor beams.

LONG SPAN BRIDGE PROJECT NO. 3 | SAN FRANCISCO-OAKLAND BAY BRIDGE SELF-ANCHORED SUSPENSION SPAN (SAS) – SAN FRANCISCO, CA

PROJECT SIMILARITIES

- ✓ 2,049-ft cable-supported bridge
- ✓ Safe, high-quality delivery
- ✓ Innovative construction staging
- ✓ +$350 million in temporary works
- ✓ Co-located staff
- ✓ Extensive marine coordination and staging
- ✓ Key personnel involvement
- ✓ In-house construction engineering
- ✓ Designed for and constructed in an area of high seismicity

4. Description: AB was the lead JV partner for the new 2,049-ft self-anchored suspension span (SAS) of the San Francisco-Oakland Bay Bridge. The temporary works-access structures were designed to prevent collapse using earthquake displacement resulting from a 500-year seismic event. By the numbers, this project included a **1,845-ft main span with a 162-ft cantilevered span and a 33-ft anchor span, 525-ft tall steel tower with four legs strutted together, a 256-ft wide deck, and a 4,600-ft long, 31.5-in diameter main cable,** continuous from east anchorage to tower top saddle to northwest deviation saddle to center jacking saddle to southwest deviation saddle back to tower top saddle and back down to southwest deck anchorage.

5. DBE/Small Business Goals: DBE information not available; 1.3% DVBE Participation

15. Project Delivery Method: Design-bid-build **Strategy 1: Partnering** | Early in the project, the executive team (Caltrans and AB) developed a partnering plan that included a formal partnering event, a signed charter, a risk identification and mitigation plan, an issues resolution ladder, and agreement on key performance indicators (KPIs) used to measure success.

Strategy 2: Working Drawing Campus and Work Groups | One challenge identified in partnering included developing a process for reviewing the working drawings in a timely fashion. AB and Caltrans implemented a Working Drawing Campus approach which accelerated the working drawing development and approval process. The campus co-located Caltrans, the designer, and AB personnel and fostered collaboration on the design, working drawings, and shop drawing reviews. The strategy accelerated the design development and reviews by Caltrans, consultants, outside stakeholders such as the U.S. Coast Guard, regional transit authorities, port authorities, U.S. Customs, and City of Oakland.

Strategy 3: Fabrication Management and QA/QC Organization | SAS was one of few Caltrans projects to use foreign steel. At the time, Buy American Provisions were not required for the 50,000 tons of steel deck and towers, 30,000 tons of temporary steel trusses, 6,000 tons of parallel wire strand cable, and other bridge components. With fabrication facilities in more than eight countries which were not familiar with Caltrans, AASHTO/FHWA, and American Welding Society specifications, quality was identified as a major risk. AB and Caltrans collaborated on audits, vetting of facilities prior to issuing contracts, and co-located staff at the major fabricator's shops. The strategy successfully delivered all fabricated products without having to reject and/or re-fabricate any items, and all products were accepted by Caltrans without impacting the project schedule.

2. References: Bill Casey, Caltrans Project Director, 510-455-1798, bill.casey@dot.ca.gov

Marwan Nader, Design Project Director, TYLin (Caltrans' engineer), 925-285-3985, marwan.nader@tylin.com

12. Key Personnel: Dan Raynor, Senior Engineer/Construction Manager - Temporary Truss Nov. 2006 to Dec. 2009 | Steve Carpenter, General Superintendent (Foundation Contract), Nov. 2007 to Aug. 2009 | Added Value: Josh Ishibashi

6. Original Contract Value: $1.43 billion **7. Final Contract Value:** $1.99 billion **8. Liquidated Damages/Other Penalties:** None. **9. Claims:** The AB-led JV entered into a global settlement agreement with the owner for $25.5 million resolving all claims and closing out the contract. **10. Original Completion Date:** Feb. 2014 **11. Actual Completion Date:** Oct. 2015 | Change in schedule and cost was due to a number of owner-required design modifications and owner-initiated changes. **13. OSHA Citations:** None **14. Incidents:** None

16. Controlling/Reducing Costs: Example 1: Means and Methods/Temporary Works | As the world's longest self-anchored suspension bridge, this project required unique means and methods to construct. The overarching concept included long span falsework trusses for erection of large segments, specialized equipment, and pre-assembly off-site. The methods were designed, reviewed, and approved in collaboration with the owner and design team, unique features include non-traditional cable anchorages which are anchored at one end of the deck. This meant the superstructure was built first then cables. **To temporarily support the girders, a long span truss falsework weighing 24,250 tons was designed in-house and installed while fabrication of permanent assemblies proceeded off-site. This parallel work saved time and cost overall.** The long span truss had a minimal foundation footprint reducing impacts to the aquatic environment. To erect large, preassembled segments, the team designed and built a special 1,929-ton-capacity crane: the Left Coast Lifter (LCL). In collaboration with the design team and owner which eliminated dredging and refined the falsework design.

Example 2: Value Engineering and Proactive Modeling | The team used the integrated shop drawings and 3D models to review for clashes with post-tensioning, rebar, anchors, and embeds which saved numerous months of schedule and cost from reducing changes in the field. In addition, the team used the models for value engineering studies. For example, as erection proceeds, the geometry of the cable changes. The erection analysis revealed conflicts in elevation between the box girder and the cable at the beginning stages of load transfer (i.e., large cable sag). AB's team worked with the designer to develop a sequence that eliminated the transient conflicts. The scheme was proactively implemented to minimize schedule impacts.

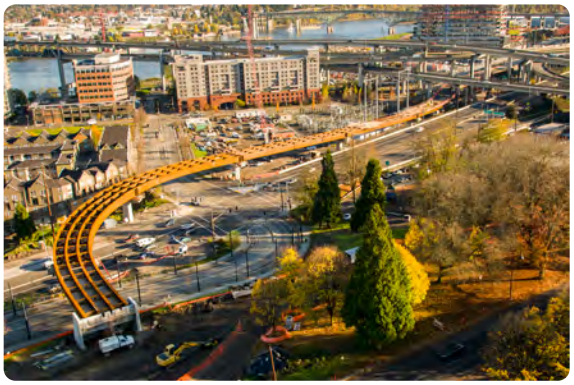
Example 3: Structural/Mechanical/Electrical Integration | The AB team collaborated with the design team to integrate the structural shop drawings with the electrical and mechanical design. The process included working with the co-located team at the fabrication sites to include preassemblies of conduit, attachments, and fixtures to the steel. They eliminated work in the field and in many cases improved constructability of the assemblies.

Example 4: Material Sourcing | SAS was bid at a time of significant steel escalation and reduced supply. To address this, AB and Caltrans collaborated on early procurement solutions that included spreading the work to multiple fabricators at various locations. This meant a large portion of the steel was fabricated across the U.S., including at AB's facilities in Oregon and Pennsylvania with the remainder fabricated overseas.

LONG SPAN BRIDGE PROJECT NO. 4 | PORTLAND-MILWAUKIE, WEST SEGMENT – PORTLAND, OR

PROJECT SIMILARITIES

- ✓ 1,760-ft multi-modal bridge
- ✓ Safe, high-quality delivery
- ✓ CM/GC project
- ✓ Drilled shaft and pile foundations
- ✓ Agency, ODOT, TriMet, UPRR, and CoP coordination
- ✓ Early work packages
- ✓ Extensive DBE program
- ✓ Transparent, open book estimating
- ✓ Major traffic control efforts
- ✓ Key personnel involvement
- ✓ Complex utility relocations



4. Description: Stacy and Witbeck was the managing joint venture partner on this **CM/GC project** for construction of one mile of light rail guideway, over half of which is on a complex 12-span bridge structure and retained fills. The project includes in-street construction, dedicated right-of-way, and work in high impact traffic areas, including arterial streets such as **SW 5th Ave., SW 4th Ave., and Naito Pkwy. The 1,760 lf multi-modal structure crosses over Harbor Drive, and the Harrison Connector Streetcar alignment, under high voltage power feeds to major CoP substations, and**

then threads under ODOT's I-405 and I-5 structures. The 10-bent structure consists of drilled shafts, ranging from 75-100 ft in depth and 8 ft in diameter.

5. DBE/Small Business Goals: Goal DBE: 22% **Actual DBE:** 24.06% **Apprenticeship Goal:** 20% **Apprenticeship Actual:** 26%

15. Project Delivery Method: CM/GC **Strategy 1: Incentive Program** | The project included an incentive program implemented by TriMet to review and reward positive contractor performance in elements vital to TriMet's interests. The team was reviewed quarterly on safety, quality, community relations, cost control, and schedule. We received 95.3% of the incentive, with 100% received in the community relations category and 99% in cost control. Although the incentive was motivating, the real benefit was the honest communication and the opportunity to openly receive feedback.

Strategy 2: Transparency in Cost and Schedule Development | The team maintained an open-book approach to cost estimating where we compared estimates with TriMet's cost estimators at each design milestone. Where estimates for certain scopes were not in line with expectations, the team jointly evaluated design and construction alternatives and performed additional scope-specific estimates to evaluate cost and schedule impacts of these concepts. All efforts were carefully tracked, documented, and shared with TriMet having the final decision-making authority for each solution.

2. References: Sean Batty, Director of Stations and Guideways, TriMet, 503-962-2261, battys@trimet.org

John Lostra, PE, RE AECOM, 503-927-3686, john.lostra@aecom.com

12. Key Personnel: Jim Abramson, Principal-in-Charge, Sept. 2011 to May 2014 | Dan Raynor, Structural Designer, Jan. 2010 to Mar. 2011 | Faye Burch, DBE and Workforce Coord., Sept. 2011 to May 2014 | Added Value: Brent Allison, Inna Mishchuk, Brandi Lisle

6. Original Contract Value: $86 million **7. Final Contract Value:** $88 million | Increase due to owner requested additional scopes. **8. Liquidated Damages/Other Penalties:** None **9. Claims:** None **10. Original Completion Date:** Feb. 2014 **11. Actual Completion Date:** Oct. 2014 | Due to design delays and owner-initiated scope increases. **13. OSHA Citations:** None **14. Incidents:** None

Strategy 3: Weekly Coordination Meetings | Stacy and Witbeck worked closely with the owner's representatives to understand their concerns and address them in a timely manner when issues or changes were identified. **In one example, the owner and design team identified a need to lengthen a bridge girder span the week we were scheduled to have the bridge shaft drilled. The team responded by moving the drilling subcontractor to a different location and quickly reaching out to the steel girder fabricator to work through the design changes to avoid a potential delay to the overall project turnover.**

16. Controlling/Reducing Costs: Example 1: Multiple GMPs and Early Works Packages | Early ground improvements and access to drilled shaft locations ensured time for bridge construction and for the team to work with designers to identify and resolve conflicts in the design. Coordination with the adjacent building contractor allowed crews to begin MSE walls, which required pre-loading and a nine-month settlement period prior to any civil or utility work. All of these challenges were identified and coordinated during the pre-construction phase of the project.

Example 2: Coordination with Others | There were numerous adjacent projects for the CoP and private developers during construction. The team facilitated regular coordination meetings to ensure that the community was not unnecessarily impacted by construction.

Example 3: Structured VE Process in Co-Located Environment | Throughout pre-construction, Stacy and Witbeck integrated with the design teams to collaborate with TriMet to review alternatives for optimizing design to achieve schedule and budget goals. For example, Stacy and Witbeck performed constructability reviews and identified value engineering efforts that resulted in changes to retaining wall types and the number of walls.

Example 4: Early Coordination for Specialty Tasks | The work sequence was critical to meeting the project milestones. Tree removal and temporary paving started early to support third party utility relocations. To facilitate this sequence, early selection of a qualified arborist was critical. Of the 185 trees removed, the majority were large trees in downtown Portland. The team worked with the owner to ensure that this scope was done in a sensitive manner and a total of 238 trees were replanted.

LONG SPAN NO. 5 | SIXTH STREET VIADUCT REPLACEMENT PROJECT – LOS ANGELES, CA

PROJECT SIMILARITIES

- ✓ 3,500-ft tied arch viaduct
- ✓ Safe, high-quality delivery
- ✓ CM/GC project
- ✓ Drilled shaft and pile foundations
- ✓ DOT coordination
- ✓ UPRR coordination
- ✓ Early work packages
- ✓ Extensive DBE program
- ✓ Transparent, open book estimating
- ✓ Major traffic control efforts
- ✓ Key personnel involvement
- ✓ Strategic demolition of existing bridge with no adverse impacts to the environment

4. Description: The iconic Sixth Street Viaduct, located just east of downtown Los Angeles, is the longest of the bridges crossing the Los Angeles River. Stacy and Witbeck was part of the joint venture CM/GC team responsible for **demolition of the existing 3,500-ft viaduct and construction of a replacement bridge which is a signature cable-concrete-arch suspension bridge. The new bridge spans two active rail corridors (18 tracks total), including UPRR. Associated work includes utility relocations, intersection reconstruction, and a multi-use walkway and a 12-acre community park below the new bridge.**

5. DBE/Small Business Goals: DBE Goal: 23.95% **Percentage Achieved:** 24.23%

15. Project Delivery Method: CM/GC **Strategy 1: Railroad Coordination |** Coordination with the railroads, **specifically UPRR, was a major risk and concern of the client that Stacy and Witbeck's team was able to mitigate.** To manage this risk, Stacy and Witbeck assigned a single point of

contact to the railroads and vice versa. The team also created a task group to ensure that all communication with the railroad was in line with the team's Project-First approach. The team then led consistent meetings with each individual railroad agency to provide updates, address concerns, and prioritize submittal reviews. All said, these approaches significantly reduced risk on the project.

Strategy 2: Partnership in Innovation | The CM/GC method was essential to this project's success as it incorporated numerous advancements in engineering. The bridge is designed to remain undamaged and operational after a 1,000 year seismic event and is believed by the City and design professionals to be the world's longest, seismically isolated concrete tied arch bridge. It features the first U.S. application of seismic isolators within the verticality of a bent, the world's first use of triple-pendulum friction bearings modified to stiffen after a predetermined displacement, the first U.S. bridge to use post-tension couplers, and Caltrans' first use of grade 80-ksi reinforced concrete. These "firsts" required significant constructability analysis, design review, and coordination in pre-construction to ensure that the design was constructable.

Strategy 3: Maximizing the City's Investment | This high-profile project was a major investment for the community and DBE and workforce development goals were paramount to its overall success. Through focused outreach and careful monitoring, the team exceeded the City's goals. The City's goals of 28.3% people of color and 16.67% apprentices were significantly exceeded, with 72.99% and 25.77% respectively.

2. References: Shay Doong, PE, Senior Civil Engineer, Bureau of Engineering Department of Public Works, 213.539.7156, shawyue.doong@lacity.org

Natalie Moore, PE, CCM, Senior Civil Engineer, Bureau of Engineering Department of Public Works, 213.473.7419, natalie.moore@lacity.org

12. Key Personnel: John Boknecht, Estimating Oversight, Apr. 2019 to July 2022

6. Original Contract Value: $270 million **7. Final Contract Value:** $363 million | There were significant design issues and owner-initiated changes. Although the project experienced this cost increase, it was delivered on time and with high levels of owner satisfaction. . **8. Liquidated Damages/Other Penalties:** None **9. Claims:** None **10. Original Completion Date:** July 9, 2022 **11. Actual Completion Date:** July 9, 2022 **13. OSHA Citations:** None **14. Incidents:** None.

16. Controlling/Reducing Costs: Example 1: Early Work Demolition Packages | To accommodate the new structure, demolition of 13 buildings was required. Prior to demolition, the team engaged a firm to perform analysis and inspection on the buildings to identify any required abatement and report findings to the team. Then, for the multiple locations where lead and asbestos were identified, a specialty subcontractor performed the abatement prior to demolition beginning. Although vibration monitoring was not required for the building demolition, the team did install vibration monitoring for the demolition of the existing bridge structure. These advanced efforts allowed for the major construction work to begin as planned.

Example 2: Engineered Geometric Control Plans | The bridge required 26 million lbs of multi-tiered falsework to build the structure. The superstructure includes 10 pairs of arches, which have a 9 degree outward cant, are 10 ft in width, and range from 30-ft to 60 ft-tall. The bridge also curves through the downtown area. Construction of the new bridge required strict compliance with a detailed Geometric Control Plan, which dictated all aspects of construction including sequence, falsework erection, concrete placement, post-tensioning, and adjustment of cable-stays. Throughout each of the project's 22 phases, quality was extremely important, where tolerances were extremely tight. Each arch requires 25 cables to connect the arch ribs and the edge girder, which were monitored with strain gauges as construction progressed to ensure that new work installed did not impact tension throughout.

Example 3: Envision Certification | Environmental sustainability was a key goal of the City. The team partnered with the owner's design team to achieve an Envision Platinum Award. We worked with the designer during pre-construction to earn points while maintaining the budget.

Example 4: Innovation in Mass Concrete | The project included over 56,000-cy of concrete and temperature control was a major challenge. The team tested several methods, including tubes carrying cycled water and ice. When these measures proved to be ineffective and expensive, the team developed a successful method of injecting liquid nitrogen into each ready-mix truck when it arrived on-site, achieving optimal temperatures and high quality.

1.1.5 ADDITIONAL PERSONNEL

Pre-Construction Manager/Deputy Project Manager – Jennifer DeLong

Why the Role is Critical/Description of Role Jennifer will be responsible for overall pre-construction task group organization and oversight, partnering with Diversity Administrator Faye Burch to carry out DBE outreach and engagement, implement workforce development programs, and oversee project-wide activities such as document control and permitting. Because the project will be organized by the three major work areas, Jennifer's role will be critical in connecting all planning activities and facilitating efficient pre-construction tasks, especially the volume of required plans, submittals, and documents outlined in the pre-construction tasks. During construction, Jennifer and Steve W. will have overall responsibility for delivering on comprehensive project goals that go beyond budget and schedule performance.
Relevant Experience Jennifer has 16 years of heavy civil construction experience, the bulk of which have been spent with Stacy and Witbeck, and 26 years of organizational management experience. Jennifer began her career on the Portland Transit Mall project, with Steve W. and Jim, just blocks away from the Burnside Bridge. In the time since, Jennifer has worked on five CM/GC projects, as well as a major design-build project, providing her with best practices and lessons learned to be applied to the management of the pre-construction phase. Jennifer will ensure that the team not only delivers the Project safely, on-time, and within budget, but maximizes the positive impact left on the community through DBE, workforce, sustainability, and community engagement activities.

Demolition/Early Works Manager – Darren Lueking

Why the Role is Critical/Description of Role Darren will be responsible for working with the Project Team to build upon the Agency's suggested early works packages and identify the most cost-effective balance of early works in order to achieve budget certainty. He will also be responsible for coordinating demolition activities across the Project to ensure the work is planned in detail, incorporates innovative approaches to minimize the impacts, and prioritizes safety and compliance. These critical scopes, which have a significant ability to impact the Project schedule and budget, will benefit from Darren's focused management.

Relevant Experience Darren has 30 years of experience, the last 28 of which have been with Traylor. He has managed in-water demolition and construction on projects like the 17th Street Causeway Bascule Bridge, IH-45 Galveston Causeway Bridge Replacement, Honolulu Authority for Rapid Transit's (HART) Airport Guideway and Stations Project, and the Sam Houston Tollway Ship Channel Bridge Replacement. Darren's technical bridge building experience provides him with necessary knowledge to provide expert advice and constructability input in order to achieve cost and schedule certainty early in the Project.

General Superintendent – Steve Carpenter

Why the Role is Critical/Description of Role Steve C. will be responsible for overall field operations, with a special emphasis on ensuring worker safety, overall quality, and efficient field operations. This project has a very limited work area and logistical challenges due to urban setting. His input in the construction plan development is essential for planning the work so that his crews can execute the plan. He will collaborate with Quality Manager Jovian Acosta, Quality Program Advisor Brandi Lisle, Safety Manager Paul Pletcher, and Workforce Development Coordinator Julie Greb to develop training programs to ensure all craft receive equitable training and the proper support to safely and efficiently construct the work. Steve C. will be responsible for setting a consistent tone among craft forces for safety, quality, inclusion, and community relations. This role is critical to achieving the Project goals and maintaining harmonious craft relations.

Relevant Experience Steve C. has more than 40 years of experience in heavy civil construction, including 30 years of construction management, the last 16 of which have been with Traylor. Steve C. has focused experience leading teams in marine construction, including field supervision of demolition, projects over railroads, deep marine foundations, and complex long span structures. Steve C. will apply recent experiences from the Mount Vernon Viaduct, Tappan Zee Bridge, the HART Airport Guideway and Stations Project, and background in the field as a pile driver and tugboat operator to his management of the Project's field activities.

Deputy Long Span Construction Manager – Jared Carlson, PE

Why the Role Is Critical/Description Of Role Jared will be responsible for working with Dan, Darren, Steve W., Steve C., and the construction team to support the estimating, scheduling, and execution of the Project's long span. He will manage coordination with critical stakeholders and provide critical oversight, in collaboration with Fabrication Manager Josh Ishibashi, for the long span bridge components. Jared will also be a valuable resource to the Agency in selecting a bridge type – Jared has already developed schedules for both bridge types, performed a benefits analysis, and produced work plans in order to compare the two scenarios. During construction, Jared will be focused on minimizing impacts to the area stakeholders and maintaining a safe, efficient construction sequence.

Relevant Experience Jared has 15 years of heavy civil construction experience, the vast majority of which has been on complex bridge construction projects. Jared's experience includes complex cable-stay and long span bridges. Jared is an excellent technical builder, detailed planner, and innovator. Recent projects include the Brightline Zone 4 project which featured 28 bridges over water, Edmonton Valley Light Rail Tawatina Bridge which was a three-span cable-stay bridge, and the Queensferry Crossing, where he oversaw several heavy lift operations. Jared's solutions-oriented approach to project challenges will be a major benefit to the Project, where evaluation of means and methods will be essential to the pre-construction phase and an efficient construction sequence.

1.1.6 – CRITICAL SUBCONTRACTED SCOPES IN PRE-CONSTRUCTION

We have applied our understanding of the Project's scope, potential risks, and best practices related to the work to identify potential scopes that would benefit from early subcontractor involvement.

DRILLED SHAFT SUBCONTRACTOR

Onboarding a drilled shaft subcontract early in pre-construction will be essential to beginning a test shaft program to finalize depths and evaluate means and methods for the Project. This subcontractor will also help develop and refine foundation options and accompanying equipment. These early decisions will then allow for the trestle system's design to progress on time and appropriately accommodate the equipment needed. We will also solicit their input in development of the site and laydown yards to accommodate for slurry tank systems and rebar assembly areas. AB and Traylor's capacity and experiencing self-performing drilling operations will also contribute to the successful management of this scope.

GEOMETRY CONTROL/ERECTION ENGINEERING SUBCONTRACTOR

Early involvement of an engineering subconsultant focused on geometry control and erection will be essential to comprehensive work planning. They will work with the A&E to appropriately plan for equipment loading and temporary works, which will then inform our construction planning. Their work will be integral to the development and refinement of the final design, so early involvement is critical.

STRUCTURAL STEEL SUPPLIER(S)

Due to market demand, early engagement of structural steel suppliers will be key to reducing risk and ensuring cost and schedule certainty. We will procure these materials as early as possible to reduce risk and facilitate early coordination with the U.S. Coast Guard, PBoT, and ODOT for permits and approvals of planning documents. Pre-construction with these suppliers will also allow for Fabrication Manager Josh Ishibashi to collaborate in developing mockups of critical components to proactively identify issues, contribute to constructability reviews, and reduce risks before erection begins in the field.

BASCULE MACHINERY AND EQUIPMENT SUPPLIER(S)

Jene and John S. will work with the bascule machinery and equipment supplier to ensure the schedule appropriately incorporates fabrication and supply timelines, procure materials early to reduce schedule and cost risks, and incorporate constructability and operational considerations into the overall design. We intend to self-perform the erection, alignment, balancing, and commissioning of the leaves, which will be closely coordinated with the machine and equipment suppliers. John S., Jene, and Dan have already visited Steward Machine Co. and G&G Steel, Inc. to discuss the project, and both AB and Traylor regularly work with these firms on other projects.

CABLE-STAY SYSTEM SUBCONTRACTOR

Inclusion of the cable-stay system subconsultant early in the Project will allow Dan, Jared, and Josh to collaborate in the development of plans for specific systems and components to maximize the interior tower anchor box space. Early involvement also allows for testing of components if desired, as well as reduce schedule and budget risks.

EARLY INVOLVEMENT OF DBE SUBCONTRACTORS

There is also an opportunity to include DBE subcontractors early in the Project, through conventional subcontracts and mentor-protégé relationships, so that they gain exposure to the overall pre-construction phase. We have a preliminary understanding of potential scopes for DBE involvement in pre-construction, such as demolition, survey, roadway improvements for detours, and utility relocations. Steve W., Faye, and Jennifer will prioritize outreach to interested subcontractors immediately upon NTP.

Over the last nine months, BBP has reached out and met with many of the major subcontractors and suppliers we believe are critical to Project success and the achievement of Agency objectives. Understanding the Agency's desire to participate in selection, we have not made any commitments, but have focused our outreach efforts on Project awareness, supplier/subcontractor concerns and constraints, and capacity. This has included five shop visits to steel manufacturers, visits to specialty bascule machinery and engineering firms, meetings with drillers, and discussions with the premier heavy lift and post-tensioning subcontractors. All entities have expressed a keen interest in working with our team, and we are eager to work with the Agency to select the most highly qualified subcontractors.

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1.2.2 CONSTRUCTION RISKS

Appropriate identification, allocation, and mitigation of risk is an opportunity for BBP, the Agency, and key stakeholders to jointly develop common strategies focused on the on-time, on-budget delivery of the Project. We will begin the risk management process shortly after NTP with the formation of the Risk Management Task Group. BBP's members of the group, Steve W., Dan, Jennifer, and John B. and will follow our phased approach to collaborate with the Agency toward risk management.

Regardless of who owns the risk, the task group will work collaboratively to develop strategies to eliminate, minimize, and/or mitigate its impact on the Project. The task group will involve additional Project team members, subcontractors, and third parties, when appropriate, to develop solutions as mitigations may require additional design, modifications to the contract, resequencing portions of the work, or changes to the interfaces with stakeholders. As we prepare the GMP submittal, the task group will identify and include contingencies for residual risks that cannot be accurately quantified and accounted for in the Project schedule and budget. Our preliminary determination of the Project's most significant construction risks is below.

LEGEND					
	$ Cost	Time	Environment		
	Safety	Third Party	Neighborhood		

RISK 1: SKILLED CRAFT AND SUBCONTRACTOR CAPACITY

Impact to: $ Time Safety | **Allocation:** CM/GC | **Significance:** Significant regional construction activity has the possibility of impacting labor and subcontractor resources, resulting in safety, schedule, and cost impacts.

Mitigation:

- ✓ Continue outreach to Union partners and trade, training, subcontracting, professional, and supplier community.
- ✓ Leverage resources of three major heavy civil construction companies to develop/mentor and retain skilled craft and subcontractors.
- ✓ Staff Project with full-time workforce development and HR personnel, including Workforce Development Coordinator Julie Greb, to conduct training with craft and staff, to resolve issues, provide Employee Assistance Program, and monitor the overall culture.
- ✓ Perform package-specific outreach and training with subcontractors and suppliers to ensure competitive, comprehensive bidding.
- ✓ Provide advancement opportunities for staff, craft, and subcontractors to further develop and retain knowledge/staff on the Project.
- ✓ Ensure a diverse management staff and workforce.
- ✓ Implement a Project-specific workforce development and engagement plan that will leverage available programs.

RISK 2: STAKEHOLDER CONSTRAINTS

Impact to: $ Time Safety Third Party Environment | **Allocation:** Shared | **Significance:** Coordination with stakeholders, especially UPRR, ODOT, and the U.S. Coast Guard, will be essential to an efficient construction schedule. Failure to properly coordinate, communicate, and plan for stakeholder constraints and requirements could severely impact the Project schedule, budget, and the public's perception. | **Mitigation:**

- ✓ Continue outreach and communication with stakeholders to understand constraints and appropriately incorporate them into the Project's construction planning and scheduling.
- ✓ Include key subcontractors early in the development of work plans.
- ✓ Hold check-ins at regular intervals, as well as Project schedule and planning meetings, so that they understand the Project's progress, have the ability to weigh in on decisions, and understand how their decisions/constraints impact the overall Project.
- ✓ Involve stakeholders in construction update and scheduling meetings throughout the duration of the Project.
- ✓ Communicate honestly, openly, and in a timely manner.
- ✓ Support the Agency-led public information process with any information necessary.

RISK 3: UNFORESEEN SUBSURFACE CONDITIONS

Impact to: $ Time Safety Third Party Neighborhood | **Allocation:** Shared | **Significance:** The Project's industrial environment, limited work zone, and close proximity to adjacent structures and utilities complicate the ability to accommodate unforeseen subsurface conditions. The presence of unforeseen utilities, foundations, or geotechnical conditions could impact the deep foundation work, ground stabilization activities, demolition, and adjacent structures, which could then impact the Project schedule and budget performance.

Mitigation:

- ✓ Assign third-party and utility leads to manage and monitor subsurface investigation/survey teams, to add to the BrIM model.
- ✓ Work with the Agency and A&E to perform robust potholing, sampling, and testing to verify data so the design can advance.
- ✓ Install vibration, noise, and settlement monitoring systems before work begins to set baseline and maintain active alarms throughout construction.
- ✓ Select drilled shaft and ground stabilization subcontractors early to solicit input on layout and sequencing, as well as schedule.
- ✓ Provide management and identified craft with HAZWOPER training.
- ✓ Leverage BBP's in-house engineering to efficiently develop solutions/work-arounds.

RISK 4: MATERIAL ESCALATION AND AVAILABILITY

Impact to: $ Time | **Allocation:** CM/GC | **Significance:** Failure to plan for material escalation and availability, especially for the significant volume of steel and concrete, could negatively impact the budget and schedule.

Mitigation:

- ✓ Leverage relationships and early conversations with steel suppliers to continually monitor market conditions, capacity, and interest.
- ✓ Develop multiple work packages and construction sequencing, including early procurement packages, for structural steel that distributes needs over time rather than requiring one mega-package.
- ✓ Assign champion for structural steel packages, Fabrication Manager Josh Ishibashi, to monitor progress.
- ✓ Use past experiences to work with A&E to develop mix designs that provide the best value and protect against cement shortages.

RISK 5: COORDINATION OF MOVABLE BRIDGE LEAF, MACHINERY, ELECTRICAL COMPONENTS

Impact to: $ Time Third Party | **Allocation:** CM/GC | **Significance:** Failure to properly coordinate the movable bridge leaves, machinery, and electrical components could negatively impact the Project's schedule and budget performance, as well as lead to increased maintenance costs and issues for the Agency. | **Mitigation:**

- ✓ Create a Movable Bridge Task Group immediately upon NTP, led by Movable Bridge Coordinator John Schober and Movable Bridge Construction Manager Jene Van Zant with involvement from the larger Project Team, including the Agency's bridge maintenance staff input on fabrication, procurement, and assembly schedules and costs.
- ✓ Develop a BIM model.
- ✓ Leverage the lessons learned from John's 40 years of experience, as well as Jene and Demolition/Early Works Manager Darren Lueking's 20+ years of experience to apply best practices to the Project.
- ✓ Select a movable bridge commissioning subconsultant early in the Project.
- ✓ Leverage relationships with specialize fabricators and suppliers to solicit involvement and input on fabrication, procurement, and assembly schedules and cost.

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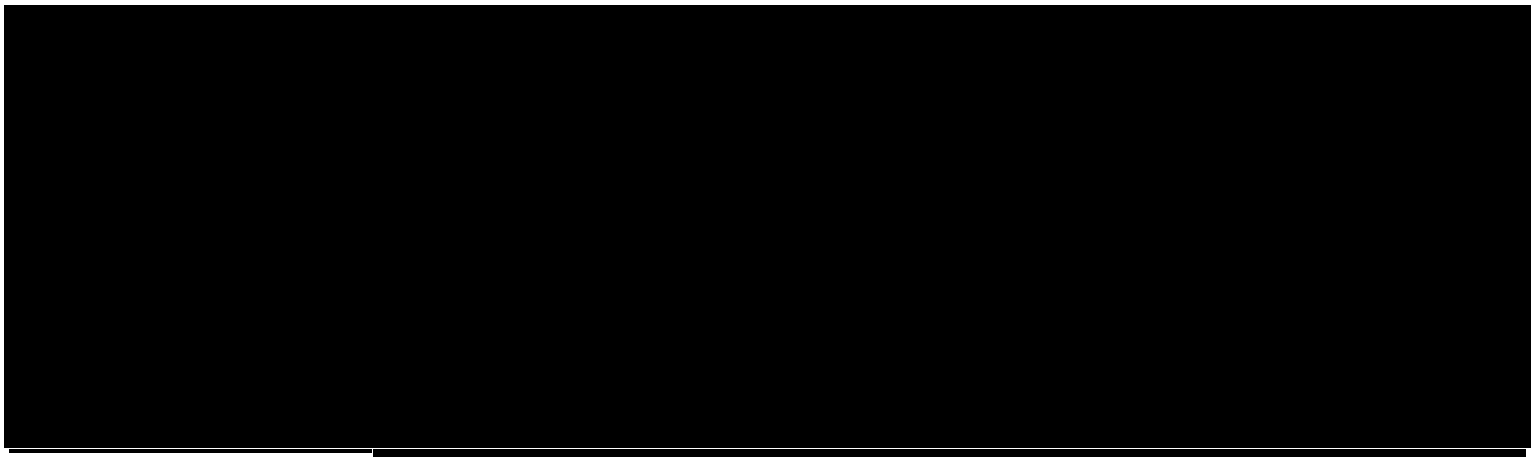

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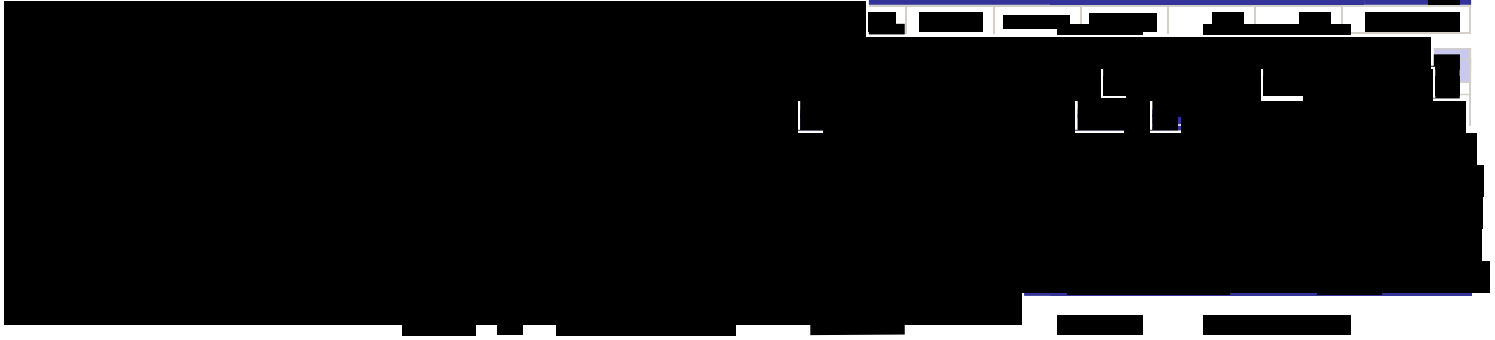

Every step of subcontractor solicitation will be an open book, transparent process. The Agency will be invited to participate in the process to provide comments to the panel or as a panel member. This determination will be made on a package-by-package basis at the Agency's discretion. We will debrief interested subcontractors after award and coordinate with the Agency to establish an appropriate level of detail shared regarding the other bidders' information with the goal of sharing meaningful feedback with subcontractors, especially COBID-certified firms. Regardless of the solicitation type, we will record the procurement process for each package, including meeting minutes for deliberations and selection discussions. These will be kept in line with our document control processes.

1.2.6 – HIGH FUNCTIONING TEAMS

BBP is committed to cultivating a collaborative, respectful, responsive, and high-functioning environment for the Project Team, including subcontractors, stakeholders, and community members. Our approach to developing this environment has already begun through BBP's work over the last nine months. Led by Steve W., our team has worked diligently to build a foundation of collaboration, rooted in our Project-First approach. This approach, which has been a core tenet of our business and is a shared culture between the joint venture partners, means that our team will make decisions in the best interest of the Project, rather than the joint venture or our individual firms.

On a progressive design-build project in Los Angeles, the client's director believed whole-heartedly in our Project-First approach. After the team's first partnering meeting, he suggested that the phrase be painted on the conference room wall as a reminder to the entire team.

This is most effective when all Project Team members agree to do the same. This way, when issues arise, the team is focused on efficiently resolving the problem, rather than assigning blame, wasting time, and eroding the team culture. This takes trust, partnership, and mutual respect that will be built amongst the Project Team. Successful strategies to create collaborative relationships which we will apply to the Project include the following.

Organizing a CM/GC Kick-Off Workshop (sometimes called CM/GC 101) hosted by an outside facilitator to ensure all members of the Project Team, as well as identified key subcontractors or stakeholders, understand their role in the CM/GC process, expectations of each phase, and the overall goals of the contracting method. **This workshop has been used on Stacy and Witbeck's Mid-Coast Corridor, G-Line BRT Improvements, and Mountain View Grade Separation projects. Similarly on Traylor's Sterling Highway MP 45-60 CM/GC project, the team facilitated kick-off activities with the client and FHWA.**

Leveraging Formal Partnering activities to unite the team by developing shared goals. **On Stacy and Witbeck's Gilbert Road Extension, the team began with facilitated partnering and then transitioned to informal partnering when the parties agreed that trust was built and expectations understood.**

Top 5 Issues Lunches, usually at a restaurant near the project, allows for a forum to discuss the most pressing issues outside of the office. The lunch is also valuable for the personal conversations and team-building that occurs naturally. **The Portland Streetcar Loop, East Link E335, Ogden BRT, and many other Projects have successfully applied this strategy.**

Establishing Communication Ground Rules/Charter for how the team will interact and continually reinforcing the commitments made has been a successful tool in maintaining positive team relations. **On the Mid-Coast Corridor, these "Rules of Interaction" which were jointly developed through the partnering process included: Work together against project issues, not against each other; When discussing changes, focus on solutions and do not place blame or plant flags; Primary communication will use the most appropriate mechanism, always try and communicate difficult news in person first; When an issue is elevated, inform counterparts first, there is no punishment for escalation, but inaction is not acceptable**

Maintaining Continuity from Pre-Construction to Construction ensures the institutional knowledge, relationships, and understanding are not lost. Furthermore, this way the commitments made in pre-construction are carried out during construction by the team members who made them. The trust and common understanding built by all team members in this period is a key to high functioning teams. **On the Queensferry Crossing, Dan R., Josh, and Jared were heavily involved in both the pre-construction/design and construction phases. Their understanding of the project's development and client/stakeholder expectations was a major element of the project's success.**

Task Groups have proven to be highly successful in facilitating effective communication between disciplines and resolving issues early in pre-construction. The task groups will address constructability, means and methods, materials, innovations and value engineer, schedule, and cost versus budget. Our task groups will include construction, safety, quality, and sustainability personnel, as well as subcontractors and suppliers, as well as the Agency, OR, and A&E. By including the right people at the right time, we will ensure that the meetings are efficient, effective, and in service of the pre-construction phase. This coordination also leads to strong relationships and streamlined coordination during construction. **We have applied our task group approach to more than 75 CM/GC projects successfully!**

Emphasis on Pre-Planning is a core element of our success. We meticulously plan our work prior to beginning construction activities. **On Traylor's Houston Ship Channel Project, the team was responsible for construction of the main span pylon footings, which were originally intended to be built in three lifts of approx. 3,500 cy of concrete. The team worked with suppliers to reduce the number of pours to two through well-coordinating planning with the construction team, inspectors, agency staff, and subcontractors. Reducing the number of lifts saved weeks and the refinement of means and methods after each pour reduced durations from around 40 hours on the first pour to about 26 hours on the final pour. With 200 individuals on site, including the client, inspectors, subcontractors, and suppliers, this reduction was significant.**

OPTIMIZING CO-LOCATION

We applaud the Agency's decision to co-locate on the Project as it is essential to Project success and the development of a strong, effective team. Optimizations include:

- ✓ Valuing "water-cooler talk" as these personal connections make it easier for the team to discuss issues as they arise
- ✓ Maintaining space for subcontractors and stakeholders
- ✓ Communicating 'bad' news in person whenever possible
- ✓ Thoughtfully assigning offices so that staff from the Project Team members are not segregated by firm affiliation, but grouped by area of work, like bascule piers, east approach, west approach, etc.
- ✓ Periodic group community service projects
- ✓ Celebrating successes together

On the Lynnwood Link (L200) project in Seattle, the team had a large office where subcontractors, including drillers, rebar, and utility subcontractors co-located in advance of their work. This was an effective approach and facilitated a high functioning team.

1.2.7 – CONSTRUCTION ENGINEERING

BBP has extensive in-house engineering capabilities with over 50 licensed professionals providing high quality engineering support for our construction work plans. On this project, the construction engineering will be provided by our in-house staff and led by, Dan R., a licensed structural engineer. Our engineering expertise includes shoring, formwork/falsework, debris/protection for active highways and railroads, crane loading/hoisting/lifting, and structural steel erection and work bridges.

Our team of engineers are experts in construction engineering especially the work required for this project. Dan and his team designed and constructed the work bridge for the SR 520 project in Seattle. The work bridge was one mile in length and supported four 100-ton gantry cranes used to efficiently set pre-cast beams. The work bridge also supported multiple 300-ton class cranes and other equipment for drilled shafts, precast columns, and deck formwork and placement. The piles were set at 50-ft spacing (instead of the typical 35 ft) to minimize impacts to Lake Washington.

Dan led AB's in-house engineering team for temporary works on the SR 520 project in Seattle.

On the Tappan Zee Bridge, Dan was supported by 15 in-house engineers from Traylor and AB and with 20 small business design subconsultants. The team provided designs for shoring, protection, marine hoisting/lifting/loading, structural steel erection, and work bridges. The project included design of two work bridges, erection of over 100,000 tons of structural steel, soil improvements, drilled shafts, large diameter piles, heavy lifting, bridge launching, protection of Metro-North Rail and State Route 9, along with hundreds of utility relocations. On this project, the means, methods, and construction engineering were focused on minimizing impacts and accelerating construction, experience that is directly relevant to the Project.

Traylor and AB supported engineering for over 40 marine cranes, four tower cranes, multiple cranes on work bridges, and land-based cranes. The team also designed temporary works to launch girders over Metro-North Rail to minimize impacts to commuters.

AB also provided in-house engineering for the falsework, shoring, and heavy lift of the bascule leaves on the Woodrow Wilson Bridge.

Our team's experience also includes AB's design and construction of the "Left Coast Lifter" on the San Francisco-Oakland Bay Bridge SAS project. AB provided engineering for the heavy lift, structural steel erection, and falsework scopes.

While our team has the capacity and experience to perform all the construction engineering for the Project, we do intend on packaging the engineering activities into smaller segments in order to include COBID-certified subconsultants to the greatest extent possible. Dan and the team took a similar approach on the SR 520 project for formwork design, as well as on Tappan Zee for marine barge stability, bridge launching analysis, structural analysis for partial widenings, and some shoring design packages.

1.2.8 – DESIGN AND CONSTRUCTABILITY COLLABORATION

As noted, a major tool our team uses to facilitate meaningful collaboration is the task group process. The task groups will be responsible for facilitating constructability reviews as the Project progresses. Our team's approach integrates value engineering, innovation, and constructability review efforts. These activities are all related and will proceed simultaneously. They are driven primarily by our iterative cost estimates, design reviews, and collaboration with the Agency and the A&E. Upon receipt of any particular design package our seasoned builders and cost estimators thoroughly examine the drawings in order to compile quantity takeoffs, consider work access and details, and assemble detailed cost estimates.

BBP uses Bluebeam Revu to perform quantity take-offs, comment on drawings, and document the information formally after design submittals. For each design stage (TSL, 30%, 60%, 90%, 100%), we open Bluebeam "sessions." This creates a PDF document that multiple people can work in, mark-up, and comment on at the same time, while capturing this information in one document. When the review period is complete, we "close" the session, thus capturing all comments. Our team will then export all comments into an Excel spreadsheet and transmit both deliverables to the Agency and the A&E. This streamlined approach avoids having to compile multiple documents and provides a platform for reviewers to see comments from others to avoid duplication.

This identifies the most critical cost drivers and directs attention to project elements that will most benefit from VE solutions. Most VE alternatives are discovered during the pre-construction process. However, we will continue to seek out VE options during construction should new information become available. We fully embrace the CM/GC concept that cost savings resulting from our efforts will be realized by the Agency.

Through this thorough investigation, we are able to identify potential optimizations and proactively mitigate Project challenges. Application of this process has led to the following project innovations.

Portland-Milwaukie Light Rail Project (East and West Segments), Portland, OR: A significant number of walls were initially designed as cast-in-place to accommodate the predetermined job wide loading requirements. Working with DEA, it was determined that these could be changed to modular block walls since the loads that were being placed on them was not from the guideway. This resulted in nearly $3 million dollars of cost savings for the project.

Huey P. Long Bridge, Jefferson Parish, LA: Traylor's team worked with the design team to redesign the erection process from stick building 22,000 tons of new structural steel in place to prefabricating it adjacent to the bridge and hoisting up with strand jacks in 530-ft long sections. This approach minimized both vehicular and marine traffic impacts during construction. Temporary protection measures needed for vehicular, marine, and rail traffic were included in construction engineering plans of the structure and preinstalled as much as possible prior to erection.

POTENTIAL INNOVATIONS

Our team has already begun to identify potential innovations for the Project. A potential innovation is to develop **a protection canopy and/or hanging scaffolding over the railroad and roadways.** These measures will allow personnel access to the various work areas, reduce impacts to the railroad and traveling public, increase productivity, and reduce costs by increasing work windows, lessening reliance on railroad and roadway flaggers, and detours. Our team as extensive experience on multiple projects like McClugage Bridge project, the Sixth Street Viaduct, Tappan Zee Bridge, Mount Vernon Viaduct, and the Huey P. Long Bridge working with railroads to keep their operations moving safely.

Another option to facilitate construction and produce savings, is to **re-use the existing bridge substructure on the east approach for shoring under new bridge to build back span on falsework.** On the Maysville Bridge project, which is very similar in width (58 ft 6 in), span (400-ft back span), and tower height (300 ft), Traylor built the cable-stay back spans on falsework to allow steel erection to be completed off the critical path reducing costs and risk due to material supply issues. A similar approach would have the same positive impact on the Project, as well as reducing impacts to the Burnside Skatepark and Pacific Coast Fruit Company.

1.2.9 – QUALITY

Our approach to safety, quality, and environmental performance is based first and foremost around planning. Staff make solid decisions from the predictability of a thorough, meticulously detailed, and well-rehearsed work plan and are able to perform some of our highest risk activities with excellent safety and quality results in compliance with project requirements. We build compliance into every activity through planning, training, monitoring, and feedback by using project-specific plans and including subcontractor input at every stage.

It is our firm belief that when safety goals and criteria are met, quality, environmental, and other compliance successes follow. Therefore, it is essential to first establish a strong safety culture and implement excellent trainings and procedures to ensure crews, including subcontractors, have all they need to work safely always.

Our safety approach begins by tailoring our safety program to the specific protections required for the Project, chiefly in-water work and work at heights. This will include a major emphasis on the development of pre-task planning. Beginning in pre-construction, our Safety Manager Paul Pletcher will collaborate with the team to incorporate safety considerations as the design progresses through constructability reviews and during the development of the Construction Approach, Means, and Methods Plan. This will ensure that the final design can be constructed safely, setting the team up for safety success.

Planning and foresight will continue to be emphasized through construction work plan development and Job Hazard Analysis. The immense effort our team puts into these documents is the critical first step in setting the tone and expectation for a safe working environment. It also allows the team to do the preparatory work to ensure our crews have the proper PPE, tools, and equipment on day one! This planning directly impacts the safety of our workers and the public.

The ultimate success of our safety program occurs when every employee maintains a focus on safety, complies with established procedures, and feels empowered to make safe decisions. We will implement Stacy and Witbeck's CREW360 program to support this goal. CREW360 is a craft-focused safety initiative to include craft workers in the continuous improvement of our safety program, focus on leading indicators, examine existing policies, and train employees.

Similarly, quality will be considered and quality staff included in every step of the pre-construction process, through constructability reviews and construction planning. To supplement this planning, we have adopted the USACE's three-phases of inspection process. The graphic below summarizes this process. Our three-phase inspection process has been instrumental in meeting or exceeding standards of Project stakeholders.

In line with these approaches, environmental compliance will be incorporated into all Project activities. We are accustomed to performing heavy civil construction in similar areas with the same applicable environmental regulations, concerns, and conditions. We will work with the Agency and the A&E to implement the appropriate measures to control noise, dust, vibration, run-off, spills, and track-out. Our team has been actively working on evaluating demolition sequences and means and methods to reduce the duration of the activity, thereby improving environmental performance.

THREE-PHASE INSPECTION PROCESS

PREPARATORY PHASE	INITIAL PHASE	FOLLOW-UP PHASE
✓ In-office meeting before work begins ✓ Review work plan and discuss step-by-step approach to work ✓ Check plans and specs ✓ Verify submittals are in/approved ✓ Confirm QC hold points, test and inspection requirements, tolerances ✓ Set workmanship and quality expectations ✓ Review safety	✓ In-field review of the initial installation of work ✓ Refine and clarify workmanship and quality expectations ✓ Confirm test and inspection frequency and hold points ✓ Engage subcontractors and suppliers to ensure requirements for Build America and Buy America compliance are understood	✓ On-going QA/QC tests and inspections ✓ Maintain quality ✓ Refine construction methods ✓ Ensure contract compliance ✓ Track and resolve NCRs, rework, and quality action items

Quality Manager Jovian Acosta will lead our quality team and be supported by Quality Program Advisor Brandi Lisle. Brandi will be responsible for supporting subcontractors (bidding through close-out) in understanding and complying with the Project's quality standards. Jovian, Brandi, and the quality staff will report directly to Project Principal Jim Abramson and outside of the Project's production structure.

When construction begins, we will regularly train staff and craft, including subcontractors, in the importance of maintaining a worksite that is free from environmental hazards. We have included Sustainability Champion Rebecca Hastings to lead the team in implementing training efforts, review work plans, and weigh in on schedule development to fulfill environmental requirements. Furthermore, our work plans and JHAs incorporate any identified environmental concerns and proactively account for them.

During construction, safety, quality, and environmental compliance will be emphasized through the Daily Game Plan meeting. This meeting is the nerve center of our operations. This meeting is open to Agency personnel, stakeholder representatives, subcontractors, and Project staff and provides firsthand information on the next day's activities. These meetings serve to dispatch crews and equipment, schedule quality inspections, coordinate traffic control, review safety observations, and streamline general coordination. This will be the most effective and real-time point of coordination for work across the Project. This has proven to be an effective tool in ensuring crews understand compliance expectations and have all they need to follow through – resulting in high-quality, compliant projects delivered safely.

1.3 RESPONSIBLE BUSINESS PRACTICES – SUSTAINABLE PRACTICES

1.3.1 – SUSTAINABILITY PRACTICES IN MATERIAL SELECTION

BBP has experience integrating sustainable practices into materials selection, procurement, and construction on past projects. Our approaches have been tailored to meet client and project objectives including the Agency's objective to promote cost-effective, cutting-edge sustainable practices. In particular, our team has achieved certifications for sustainability rating systems similar to Greenroads and will be able to support the Agency's implementation of Greenroads on this Project. Our approaches to integrating sustainable practices on past projects is summarized in the table below and include approaches that support the Agency's "triple bottom line."

BBP's team members have offered stipends to staff to achieve personal Envision certifications. Stacy and Witbeck's internal goal is to have at least one certified individual on every project regardless of the project's size.

Work Element	Sustainable Practice Relevant to the Project	Responsibility and Plan for Implementation
Deconstruction	The Houston Ship Channel in Texas, Tappan Zee Bridge in New York, and SR520 project in Washington, as well as reference projects such as Sixth Street Viaduct minimized work on-site, reduced noise, dust, and vibration impacts to communities, and processed demolished material for recycling/reuse. The Houston Ship Channel project used hydro-demolition in combination with a water filtration plant to recycle over 2 million gallons of water.	Demolition/Early Works Manager Darren Lueking, Demolition/Early Works Project Engineer Brent Allison, and Sustainability Champion Rebecca Hastings will evaluate demolition approaches with sustainability goals in mind.
Reuse and Recycling of Waste Materials	The SR520, Tappan Zee Bridge, HART Guideway and Stations in Hawaii, and Galveston Causeway projects in Texas, as well as reference projects such as the Portland-Milwaukie Extensions implemented formal recycling plans for office material, used recycled concrete for fill and stabilization, used steel and reinforcement manufactured from 100% recycled content. The SR520 project, the entire mile long superstructure was recycled and used to fill a quarry site, which diverted 52,000 tons of concrete from the landfill. The HART Guideway and Stations project, the waste management plan that diverted 120,000 tons from landfill. Similarly, the Galveston Causeway recycled more than 100,000 cubic yards of concrete.	Dan R., Jene, John S., and the Project team anticipate reusing the existing Burnside Bridge materials for subbase and steel for the counterweight. This team will be responsible for identifying additional opportunities on the Project. In fact, Steve W. met with Schnitzer Steel's leadership in Portland to understand the steel recycling process and Cascade Rolling Mill billet output.
Low Life Cycle Costs	The Tappan Zee, Queensferry Crossing, San Francisco-Oakland SAS, Sixth Street, and Portland Streetcar Loop projects used 100-year design life methods, reduced overall life-cycle costs such as weathering steel, developed concrete mix designs, identified galvanized/epoxy coated reinforcement, and installed structural health monitor systems to provide operations with information to develop targeted inspections and maintenance plans, reducing costs and improving overall sustainability.	Jene, John S., Dan R., and Jared will be primarily responsible for leading their teams in evaluating life cycle costs for the bascule bridge components and long span. Our team has included maintenance cost in our evaluation of the tied arch vs. cable-stay design options and are prepared to discuss our findings with the Agency.
Origin of Materials	It is standard operating procedure on our projects to work with clients and designers to prioritize local materials and suppliers, as well as to ship full loads whenever possible.	All team members will be responsible for identifying nearby suppliers related to their scopes and the estimating team will work with the Agency to communicate options and develop a cost effective, environmentally efficient mix of suppliers and subcontractors.
Life Cycle and Environmental Product Declarations	On the Sixth Street Viaduct, Tappan Zee, and Downtown Redmond Link Extension in Washington, our teams used LCA and EPDs for evaluating material selection and suppliers to help define project carbon footprint. The Downtown Redmond Link Extension project, which recently achieved an Envision Platinum Award, the team performed a life cycle plan for more than 90% of all structural materials, finishes, and non-structural elements providing the team with the required depth of information to make sustainable material selections.	Rebecca and the task groups will work with the A&E and Agency to support the evaluation of applicable EPDs and LCAs during constructability and design reviews.

Work Element	Sustainable Practice Relevant to the Project	Responsibility and Plan for Implementation
Use of High-Performance Materials	On all of our team's projects, we work with the client and design teams to use high-performance low carbon steel, mix designs, and coatings to maximize efficient use of materials and limit carbon footprint. Other examples include incorporating structural-grade recycled plastic lagging for shoring walls and using recycled concrete for aggregate base	Fabrication Manager Josh Ishibashi, Dan R., and the construction management team will be responsible for considering high-performance materials through the task group and estimating process.
Material and Resource Management	It is standard practice on our projects to implement a material and resource management plan to organize recycling, manage the reuse of material, and track incoming and installed materials. For example, the San Francisco-Oakland SAS project developed a detailed plan for tracking material from manufacturing to final product as part of the overall quality plan.	Rebecca will be responsible for organizing the team's efforts to develop the Sustainable Practices Plan, which will include provisions for material and resource management. We also propose traceability analysis for 100% of the products used.
Rapid Construction and Pre-Fabrication	On the SR520, Tappan Zee, Queensferry, Portland-Milwaukie Extensions, Portland Streetcar Loop, and many others, our team used large equipment coupled with pre-assembly of steel and precast elements, offering rapid on-site installation.	Dan R., Jene, John S., Darren, and the team have based our construction approach around prefabricating and factory assembling as many components as possible.
Site Works Solutions	All of our reference projects included site works solutions to limit environmental impacts. This includes sourcing local materials, using existing facilities for offices, encouraging use of public transportation, and providing facilities for alternate modes of transport such as showers for bikers, providing brewed coffee rather than pods, installing automatic lights, sustainable office supplies, and encouraging on-line document storage. We have engaged the Green Business Bureau to evaluate policies at the Stacy and Witbeck's corporate and regional offices with a focus on continual improvement and advancement as sustainable practices evolve	Our office manager will work with Rebecca to ensure that office supplies are in line with sustainability guidelines. We will incentivize craft and staff to use public transportation to access the Project site and commit to using EVs and electric equipment on the Project when possible.
Low VOC Paints and Sealers	On the San Francisco-Oakland SAS, Tappan Zee, and Queensferry Crossing, we used low-VOC paints for interior painting and sealing of offices and buildings. Note that coated steel for bridges usually has zinc to limit corrosion and our team has been successful using weathering steel in lieu of volatile paint systems while still meeting design service life requirements.	The overall Project team will be responsible for working with Agency counterparts to select appropriate paints for the various Project elements.
Reduction of Air Pollution and Greenhouse Gas Emissions	All of our reference projects used Tier 4 equipment to reduce greenhouse gases and noise. We also incorporate solar-powered equipment, such as light plants, whenever possible.	Our construction management team, along with Rebecca, will be responsible for setting goals and making commitments related to reduced air pollution and emissions. This will include commitments to use EVs when possible and require local truckers to be based within a 10 mile radius of the Project.

1.3.2 – EXPERIENCE WITH SUSTAINABLE ASSESSMENT AND RATING SYSTEMS

TEAM EXPERIENCE

BBP's member firms have significant experience supporting clients in achieving certifications through various rating systems. Examples include:

- ✓ Assisting in obtaining LEED certification for the eBART Extension and Maintenance Facility in the San Francisco Bay Area and the LEED Gold certification on the First Hill Streetcar Maintenance Facility.
- ✓ Working with agencies to achieve Envision Platinum ratings for the Downtown Redmond Link Extension project in Washington, the Kansas City Streetcar in Missouri, and Sixth Street Viaduct Project.
- ✓ Collaborating with agencies to achieve Envision certification on the AlexRenew Wastewater Treatment Plant in Alexandria, VA and McKalla Station Project in Austin, TX.
- ✓ Constructing/selecting LEED certified office spaces.

"This may shock you, but sometimes the environment ends up on the losing side of big infrastructure projects, but nothing could have been further from the truth with your team. We were treated as equal partners in the decision making process and that is what makes this entire project a model for others to follow." Doug Gibson, Executive Director / Principal Scientist, San Elijo Lagoon Conservancy, North Coast Corridor Project

ASSESSMENT AND RATING SYSTEM IMPLEMENTATION

Successful implementation of sustainability rating systems requires close coordination between the client, the design team, and the contractor to leverage each team member's skills to achieve the highest level of certification possible. We understand that the Agency has selected the Greenroads system for this project. Regardless of the system, our approach to supporting this effort will begin early in pre-construction with the establishment of an Environmental Task Group. We suggest that the certification task is championed by co-leads – one from the Agency, one from the A&E, and Rebecca from our team. They will begin by recording all available points or credits needed to achieve the certification in a master, living matrix. The team will first eliminate credits that do not apply to the Project and prioritize the remainder, focusing first on the lowest cost, most easily implemented points. We will then organize points by the cost, time, and impact on the Project and jointly decide which points to pursue. As pre-construction progresses, this group will actively monitor progress and achievement of points against the Project schedule and budget. This approach, focused on collaboration with the A&E and client, was applied to the projects throughout this section and will result in the achievement of a Greenroads certification on the Project.

1.4 DIVERSITY, SUBCONTRACTING, AND JOBSITE CULTURE

1.4.1 – INTERNAL WORKFORCE DIVERSITY DEVELOPMENT

BBP's team members have made workforce diversity an organizational priority in line with the Agency's goal of achieving the "triple bottom line." We firmly believe that diversity in all forms, gender, ethnicity, background, and experiences, fosters innovation and leads to more creative problem-solving. Although we are proud of our impact within the industry, innovative approaches, and thoughtful growth, we recognize that there is still work to be done in achieving workforce diversity and ample opportunity for our teams to leverage our firms' positions to challenge ourselves to seek continual advancement in this area.

1. DEVELOPING A DIVERSE WORKFORCE

Our corporate and project-specific development efforts focus on creating equitable opportunities for individuals from all backgrounds. Equity in recruiting and hiring, from our management staff to the construction workforce, is an ongoing priority for Stacy and Witbeck, Traylor, and AB. Our firms actively seek opportunities to advance people of color and women who may begin in entry-level positions into technical, management, and oversight roles. Examples include advancing people of color and women who begin as apprentice or journey-level craft or administrative level to salaried and/or management positions, especially operations roles, with our companies.

To support their efforts, Stacy and Witbeck established an executive-level role whose responsibilities included oversight of internal and external diversity, supplier diversity, and social responsibility efforts. They also established a permanent recruiting position focused on outreach to high-risk communities, women, and people of color.

All three of BBP's firms have focused recruiting efforts to target underrepresented individuals. This includes hosting recruitment activities at historically black colleges and universities, providing tours and career talks at high-risk schools in low-income communities, and supporting organizations such as the National Association of Women in Construction, National Society of Black Engineers, Latinos in Transit, ENR's Groundbreaking Women in Construction events, and Women's Transportation Seminar.

Stacy and Witbeck has an established partnership with INROADS, a non-profit that creates career paths for diverse high school and college students to introduce students to the construction industry. They are the first contractor to join and provide internship opportunities. They have had three successful summers with interns to date!

At the project level, we coordinate hiring opportunities with our Union partners and through community-based and pre-apprenticeship organizations. We also post notices in targeted communities, participate in job fairs, school-to-work programs, and other community events.

The Sixth Street Viaduct Replacement Project achieved high levels of diversity at the craft level. Carpenter Rose Garcia said, "This is the first project that I walked on to where I couldn't believe how many women I saw."

BBP's firms regularly partner with industry associations like Helmets to Hardhats and the DEOD's Skills Bridge to support veteran hiring into the trades, work with local apprenticeship groups like the Oregon Tradeswomen, and support construction-specific programs at Portland Community College and other vocational schools. Other efforts include sharing information with groups supporting incarcerated or formerly incarcerated and unhoused individuals.

On a project in Seattle, Stacy and Witbeck's Project Manager hosted discussions to share about construction careers with incarcerated women in Washington's Trades Related Apprenticeship Coaching (TRAC) program. *"Having you walk us through each step really put things into perspective and helped better prepare me for what to expect out there in the field. I'm very eager to be able to get out and pursue this career, as well as the opportunity to be able to work with you in the very near future."* Michaela Anderson

Our firms actively monitor these efforts on our projects through weekly reviews of certified payroll data and project staff to review data, assess success and make adjustments if necessary, and make hiring and placement decisions. At the corporate level, we also monitor diversity statistics, review progress at the executive level, and encourage frank conversation about modifications, continual improvement, and the efficacy of programs.

Both Traylor and AB have well-established pre-employment programs, Civil Engineering Co-Op and Internship Programs, which provide experience for college students. These programs provide hands on experience and ensure that students are prepared for work upon entering the workforce.

Although hiring is an important step in developing a diverse workforce, making sure that employees from different backgrounds, diverse experiences, and different abilities are successful once they join the team is paramount. We have strong internal cultures of shared lessons learned, peer-to-peer communication and collaboration, mentorship at various levels, and formal resources like online training, Employee Resource Groups (ERGs), and structured review systems. This is all an effort to ensure all individuals have equal opportunities to advance, take on new roles, and find meaningful careers in the heavy construction industry.

Stacy and Witbeck, Traylor, and AB have active ERGs specifically Women's Resource Groups. Across our companies, our Women's ERGs have hosted conversations to share lessons learned at conferences like the Groundbreaking Women in Construction Conference, facilitated conversations around psychological safety, burnout, financial security, and career development, and connected women throughout the country with each other to form more supportive networks. BBP intends to host a project-specific Women's ERG, open to all Project Team members including craft employees.

A major testament to the success of these programs is our low employee turnover. Stacy and Witbeck, Traylor, and AB have joined as a joint venture in large part due to our similar cultures. We credit our low turnover to consistent and personal support, engaged leadership, focused training, consistent career advancement, and competitive, fair compensation. As our firms have grown, we have maintained this focus on the long-term success of our employees, which ensures that women and people of color are supported with an individual approach.

BBP's team of Key and Added Value personnel include many long-term employees of our firms – in fact, the majority of our key staff have been with their respective firms for more than 10 years!

2. ON-THE-JOB TRAINING AND APPRENTICESHIPS

To ensure that diverse craft employees are successful on our projects, we have on-the-job training, apprenticeship, and mentoring programs that our firms use to address diversity. Once individuals have joined our team, it is imperative that salaried staff and craft receive equitable training, consistent support, and are afforded opportunities to advance.

BBP's firms have formal and informal training approaches to level the playing field. For salaried staff, our firms have mentorship and development programs including rigorous onboarding, focused internships, and a culture of mentorship. With the development of more structured DEI initiatives, leaders of these programs have also made a concerted effort to ensure training opportunities are free from favoritism and as equitable as possible. It is also our policy to provide mentors for apprentices on our projects. As apprentices come onto the Project, we will match them with a seasoned journey workers.

For craft personnel, during pre-construction, we identify staffing needs and evaluate training that will be necessary for new and existing employees based on the characteristics of the Project. We identify training sources and develop a matrix of required training for use during the project. This training matrix is a valuable tool for ensuring that required safety and technical training is done without bias.

For projects of this size, we often establish project-specific training and workforce development programs. For projects in Los Angeles, Houston, and New York, as examples, we have organized and established multi-faceted workforce development programs in partnership with local resources. This required a field office large enough to facilitate classroom instruction for craft and office staff. For craft construction candidates, we administer a pre-apprenticeship program, provide hands-on skill-builder workshops, and sponsor Union apprenticeships. We will also make scholarships available for items such as tools, steel-toed boots, prescription safety glasses, and work clothing. Courses have included topics on hard and soft skills to prepare workers for long careers in construction. Workforce Development Coordinator Julie Greb has been included on our team to facilitate this type of training, and we look forward to working with the Agency to establish a program that addresses the specific needs of workers in our community.

LIST OF ACTIVITIES UNDERTAKEN TO RECRUIT/ BROADEN DIVERSITY

To summarize these efforts, below is a list of activities our firms to broaden diversity within our organization:

- ✓ Recruit from HBCUs
- ✓ Support programs like 100BlackMen, INROADS, and other advancement programs
- ✓ Offer pre-employment programs for salaried positions, including Co-Op and Field Engineer programs, rotational internships, etc.
- ✓ Monitor and report on diversity goals to the executive level
- ✓ Establish and support active ERGs for diverse groups
- ✓ Offer opportunities to engage in national conferences, workshops, and seminars to share lessons learned and create industry relationships (GWIC, NAWIC, COMTO, WTS, etc.)
- ✓ Participate in national events like Construction Inclusion Week to reflect on progress and celebrate diversity within the industry
- ✓ Request female and BIPOC craft employees from Union partners
- ✓ Support local workforce development efforts in partnership with groups like Oregon Tradeswoman and Helmets to Hardhats
- ✓ Host mandatory trainings for craft and staff related to discrimination, harassment, and sensitivity
- ✓ Create project-specific workforce development programs
- ✓ Self-impose hiring goals

1.4.2 – UTILIZATION HISTORY

BBP's team members have strong track records of achieving DBE and workforce diversity goals on heavy civil projects in Portland and throughout the country. In Portland, we have a consistent record of achieving if not exceeding DBE participation goals. Diversity Administrator Faye Burch and DBE/EEO Compliance Coordinator Inna Mishchuk were instrumental to our success on nearly all of the projects listed below.

Project	Client	DBE Goal %	Final DBE %
MAX Red Line Expansion Project	TriMet	20	20*
Gideon Street Overcrossing	TriMet	8	18.5**
Light Rail Track Rehabilitation	TriMet	12	24
Luuwit View Park	CoP	25	28
eFare Infrastructure	TriMet	22	30
Open Space Sequence Restoration	CoP	23	27
PMLR-East Segment	TriMet	22	28
PMLR-West Segment	TriMet	22	24
SW Montgomery Relocation	CoP	22	35
SW Moody Relocation	CoP	22	28
Portland Streetcar Loop	CoP	16	19
I-205 Light Rail Extension	TriMet	16	21
Portland Transit Mall	TriMet	16	19.7
Interstate MAX Extension	TriMet	18	23

* Ongoing project ** Included M/W/E/SDVBE participation

"Stacy and Witbeck has truly been the best partner to us over the years that has given us those opportunities that launched us to the next level. I value and appreciate all the relationships that have been formed over the years with many Stacy and Witbeck employees, and their continued advocacy for us many, many times over." Ryan McDonald, McDonald Excavating, Inc., MBE, DVBE currently working on the Red Line Project with our team

We are eager for the opportunity to partner with the Agency on the Project to maximize DBE participation and to apply lessons learned from other projects to our efforts. These experiences include the following.

Mid-Coast Corridor Project, SANDAG – San Diego, CA
$1.5 billion CM/GC Contract, completed November 2021
DBE Goal/ Actual: 10%/16.9% | **SBE Goal vs. Actual:** No goal/9.44%
During pre-construction, the Stacy and Witbeck-led joint venture, the client, and the disadvantaged business consultant and liaison analyzed the scopes of work to identify subcontracting opportunities. These opportunities were cross referenced with the available DBE firms in the area to develop a subcontracting/DBE plan. In addition to direct contracts to DBE firms and small businesses and second-tier participation requirements, we created a bench program based upon SANDAG's Architects/Engineers bench program. Firms were prequalified and this list was provided to project staff to contact when opportunities arose for subcontract opportunities.

The project team held monthly meetings to track the DBE and small business participation. During these meetings our team reviewed current participation and forecasted future participation by quarter, which confirmed the project was on target to exceed the overall participation goal. The team also used the meeting to discuss new opportunities for additional DBE and small business opportunities. In the end, the project team awarded over $235 million in contracts to 92 disadvantaged businesses and $97 million to 64 small businesses.

Governor Mario M. Cuomo (Tappan Zee) Bridge, New York State Thruway Authority, Design-Build – Tarrytown, NY
$3.5 billion, design-build project, completed September 2020
DBE Goal/Actual: 10%/11.47%

From day one, the project team, which included Traylor and AB, was committed to using this public investment as an opportunity for local subcontractor and supplier participation, as well as to provide opportunities to train and include a diverse workforce. The project team exceeded the DBE goal with over $408.25 million in contracts with certified businesses.

To achieve the goal, the team offered assistance in customizing scopes, committed to prompt payment of DBEs, and provided assistance in provisions for bonding and insurance requirements. The project team also participated in extensive DBE community outreach forums for subcontract and direct employee recruitment for the project.

Labor for the project was directly hired from local labor Unions. The team worked with these Unions prior to the start of the project to establish labor agreements that encouraged the hiring of women and BIPOC individuals. In turn, the project team participated in all craft apprenticeship programs and routinely hired apprentices. The project team participated in community groups like Nontraditional Employment for Women (NEW). NEW primarily serves low-income, minority women living in New York City and prepares, trains, and places them in construction and related industry positions. The project team worked with NEW to advertise and encourage participation within the labor Unions. As a result of outreach and participation in NEW and similar groups, the project team achieved participation of 3.21% for women and 28.51% for BIPOC participation.

Gideon Street Overcrossing, TriMet – Portland, OR
$9.4 million CM/GC project, completed
D/M/W/ESB Goal/Actual: 8%/18.5%

This local CM/GC project was for the erection of a 142-ft structural steel bridge weighing 100,000 lbs that spanned three sets of light rail and two sets of UPRR freight tracks. The structure included four prefabricated weathering steel towers, two weathering steel stairways, tower glazing, and two elevators. Although this project is significantly smaller than the Project, the team was able to achieve significant DBE participation in scopes similar to those anticipated on the Project.

The Stacy and Witbeck team identified the complex miscellaneous and architectural metals scopes as an opportunity to subcontract to and mentor a disadvantaged business. A local DBE/WBE firm, who typically performed small miscellaneous metals, was identified and selected during the pre-construction phase. Stacy and Witbeck invited them to assist in design reviews, constructability reviews, design meetings, pricing efforts, and value engineering exercises. Ultimately, the firm was awarded a large contract on the project for weathering steel structural stair stringers, structural steel framing, stair, truss and ornamental metal weathering steel gates and screening, bollards, lighting channel, pit ladders, planter railing, drain covers, and a first-of-its-kind bike gutter.

"The first project we did with Stacy Witbeck was in 2003. They were a very early adopter of including minorities and women in their subcontracting opportunities. For twenty years we have had a great needs treatment we appreciate that they continue to go after new opportunities that help us expand our own portfolio. We look forward to continuing to work with the progressive and innovative company in the future."
Maurice Rahming, President/GM, O'Neill Construction Group

1.4.3 – PROJECT SUBCONTRACTING, CONSULTANT AND SUPPLIER PLAN

BBP is firmly committed to maximizing the value of the Agency's investment in this project. Not only does that mean delivering a high-quality Project to the community, but leveraging its construction to grow and strengthen the capacity and capability of firms within the COBID-certified community. We understand the opportunity this project presents the opportunity to engage local certified subcontractors in a once in a generation project.

Diversity Administrator Faye Burch was recognized with Multnomah County's Gladys McCoy Lifetime Achievement Award in 2019 for her service to the subcontracting and workforce community in Portland.

OUTREACH PROGRAM

To facilitate an effective, innovative, and equitable supplier diversity program, we will work closely with the Agency to finalize our Subcontracting and Diversity Plan that balances the continued development of the Portland Metro area subcontracting market and workforce development with the Project's schedule and budget goals. We are fully committed to the achievement of the Agency's, local, and federal goals and concur with the guiding principles enumerated in the Project's General Specifications. Our approach to creating meaningful opportunities for the certified community is described below.

1. DETAILED SCHEDULE OF EVENTS

Early Outreach and Team Introduction Efforts: 6 Months Pre-RFP Release to RFP Submission

Our team began outreach with subcontractors in early 2023. Efforts included introducing our team to our network of subcontractors, presenting at local minority interest groups, and hosting Project-specific events. The purpose of these events was to raise awareness around the Project and ensure the community understood our team's interest in and approach to the Project, when subcontractors could get involved, and how to get in contact with our team. These included:

NAMCO Events – Beginning in January of this year, Steve W. and others began sharing information (project-specific presentations, flyers, business cards) regarding our team at monthly virtual and in-person events Continued to build upon longstanding relationships with the NAMCO team

PBDG Events – Our team also began speaking at monthly trade association meetings hosted at Stacy and Witbeck's Portland office in January and February, as well as at the Washington County seat in April. Most recently, Steve W., Steve C., and Faye sponsored and attended the summer cookout at NW Infrastructure's yard/office on the Willamette River to celebrate the successes of member firms and continue to energize membership about this upcoming project.

Community Events – Faye also regularly attends community events, like Good in the Hood and the Soul Restoration Centers for Black Joy to share information about the Project.

NW Minority Builders Alliance Meetings – Steve W. and our team participated in their membership meeting in Kent, WA in June to discuss the Project and our team.

LatinoBuilt Meetings – Steve W., Dan R., Jene, and Josh left flyers and made a Project specific presentation with members at the quarterly meeting in Hillsboro in April. Steve W. attended their next quarterly meeting in July at the new Lincoln High School in SW Portland.

BBP Networking Event – In March, we hosted our own networking and outreach event specific to the Project at the University of Oregon's s Urban Campus directly adjacent to the west approach of the Burnside Bridge.

Project Manager Steve W. presents to a group of interested subcontractors. After the presentation, members of the team, including Dan, Darren, Jennifer, Jared, John, and Faye answered questions and discussed opportunities for subcontractors on the Project.

Outreach and Early On-Boarding: Post-NTP

Immediately upon NTP, Faye will work with the Agency to develop and refine the Subcontracting and Diversity Plan in preparation for the 30% submittal. At this time, we will also begin early outreach activities similar to those performed pre-award. This will include:

- ✓ Co-developing and hosting pre-bid meetings and outreach events with the Agency
- ✓ Attending Trade association meetings of industry groups to share information related to Project opportunities
- ✓ Advertising in DBE, minority, and women-targeted circulations
- ✓ Maintaining our Project website for easy access to project information, including a high-level Project schedule
- ✓ Soliciting feedback from the industry related to bid package structure, size, and constraints to ensure bid packaging approach supports broad-based inclusion
- ✓ Refining our database of subcontractors, drawing from available registers and their updated skills and development.
- ✓ Maintaining the Agency's high level of interest in sharing information in diverse communities at nontraditional events and activities

Early Work Subcontractor Selection and Onboarding: Early Pre-Construction

As pre-construction ramps up, Steve W., Jennifer, and Faye will work with the Agency to develop a mentor-protégé program that meets Agency objectives. This will also include early outreach to subcontractors to solicit feedback and identify opportunities for early work involvement.

Main Package Solicitation: 90% Estimate

Faye will work hand-in-hand with Steve W., Jennifer, and John B. to continue communicating with subcontractors so they are well aware of Project opportunities, using the outreach methods described above as soon as the start of pre-construction services.

Additionally, we will host info sessions, bidding workshops, and technical review meetings to share information more directly with subcontractors. We will discuss the scopes, quantities, inclusions and exclusions, mobilization, Project constraints and challenges, schedule, and opportunities for innovation during these meetings. We will also walk through the bidding process: how to use the online applications to submit bids, and a review of all contract requirements. These meetings will be facilitated by technical staff who will be managing the specific scopes so they can expertly answer questions related to the work.

Our technical leads are committed to participating, and we will have ample time for Q&A and one-on-one follow-up. Workshops, technical review meetings, and one-on-one meetings will be held prior to the formal release of the invitations to bid.

Subcontractor Selection: 100% Estimate

Once bid packages are approved for distribution to the contracting community, our approach to ensuring broad-based, inclusive participation is achieved through the following best practices:

- ✓ Ensure bid packages are appropriately-sized and scoped to attract high levels of participation
- ✓ Solicit short-duration contracts (i.e., three-month, six-month, twelve-month, etc.) to build capacity and minimize risk
- ✓ Ensure adequate time is provided for subcontractors to respond to packages, acknowledging that DBE subcontractors may not have individuals responsible exclusively for estimating new work
- ✓ Offer estimating workshops and technical reviews throughout the procurement process
- ✓ Hold office hours where subcontractors can ask one-on-one questions to BBP staff
- ✓ Create well-defined bid packages that clearly define evaluation criteria, scope, and the process

2. INNOVATIVE MENTORING, TECHNICAL, OR OTHER BUSINESS DEVELOPMENT SERVICES

The goal of the DBE program is not just to hire firms and "check the box" on participation levels, but to actively work with them during both pre-construction and construction to ensure their success and continued viability in the industry. Our firms' access to resources and best practices will provide subcontractors with mentorship, guidance, and support. We are fully committed to assisting firms with limited resources in order to grow their businesses. This assistance is tailored to each firm's needs and can include:

Estimating Workshops – Host estimating workshops, open to all interested subcontractors, to discuss work packages, anticipated risks, requirements, and consideration of inclusions and exclusions. We will also discuss opportunities to employ materials-on-hand and mobilization funds to manage start-up costs.

Onboarding Support – Provide contracting, compliance, and technical experts to assist subcontractors during the onboarding process. This will include a detailed project onboarding presentation by our subject matter experts in safety, quality, engineering, contract administration, and superintendence of the work.

Weekly Meetings – Hold one-on-one coordination meetings to monitor progress, discuss three-week look-ahead schedules, and anticipated challenges and mitigation as needed.

Integration and Communication – Fully integrate subcontractors in planning and scheduling, including participation in the Daily Game Plan meetings during construction.

Targeted Support – Pair each subcontractor with a field engineer to streamline communication, promote teamwork, and facilitate timely issue resolution.

Bonding Assistance – Offer partial bonding (using smaller/unbundled contracts) to allow firms to gradually increase their bonding capacity. Roll their bonds as their opportunities grow.

Quality Training – Conduct quality control training, including work plans, and focus on quality hold points for subcontractor supervision and craft workers. Provide trainings on how firms could create their own quality control program. The team has identified Brandi Lisle as a Quality Program Advisor to assist in this effort.

Safety Mentoring – Provide safety training for job hazard analysis, create site-specific safety plans, and promote our physical and psychological safety culture. Acknowledge positive actions.

Project Administration – Provide one-on-one assistance to expedite the submission of timely, accurate pay requests and other administrative requirements.

Cashflow – Include a prompt payment mechanism for subcontractors within subcontractor agreements and processing semi-monthly payments.

Workforce Diversity Training – Provide training for workforce requirements and diversity goals.

Second-Tier Subcontracts – Require non-small business and DBE subcontractors to employ these same efforts when soliciting lower-tier subcontracts and suppliers.

BBP has found that offering these services leads to successful project outcomes for our subcontractors, including increased capacity. C.O.A.T Flagging (pictured here), a local DBE/WBE/MBE firm, has partnered with Stacy and Witbeck on many regional projects, and significantly grown their business, services offered, and capacity.

We also look forward to working with the Agency to identify firms that may benefit from participation in a formal Mentor-Protégé Agreement. We anticipate this will be open to any interested DBE firms and protégés will be selected through a transparent process, with the Agency's concurrence. Once protégés are selected, we will provide tailored Mentor-Protégé Plans that address the unique needs of participants and help them meet strategic business objectives. These plans will encompass focus areas, key points of contact, goals, a meeting schedule and content delivery plan, as well as milestones to be achieved during the Project. We will assign specific team members to work with our DBE subcontractors and subconsultants based on technical expertise. We will also conduct consistent check-ins with both our in-house technical experts and the DBE protégés to ensure that execution is progressing as planned and meeting participants' expectations.

3. MEASURING SUCCESS

Faye will maintain an independent report of BBP's monthly progress for DBEs and Key Performance Indicators, achievement of subcontracting goals, mitigation of any issues, and testimonials related to workforce achievements. Although success will be measured against the Project's goal, our overall objective is to ensure that the Agency's investment in the Project benefits the wider contracting community by giving subcontractors the opportunity to increase capacity, improve capabilities, and continue to grow in the market.

4. PROJECT-SPECIFIC DIVERSITY PLAN

a. Special Outreach Events

Faye and Steve W. have already begun to leverage organizations and potential partners on the Project. We have strong partnerships with, and will continue to leverage the following channels:

- ✓ Oregon Association of Minority Entrepreneurs
- ✓ Beaverton's Business Executive Sustainability Training Headquarters
- ✓ LatinoBuilt
- ✓ Professional Business Development Group
- ✓ National Utility Contractors Association
- ✓ National Association of Minority Contractors
- ✓ Associated General Contractors
- ✓ Micro Enterprise Services of Oregon
- ✓ Washington County Hispanic Chamber
- ✓ Asian Pacific American Chamber of Commerce
- ✓ Oregon Native American Chapter
- ✓ Oregon and Washington Daily Journal of Commerce
- ✓ NAYA Native American Youth Association
- ✓ Good in the Hood
- ✓ Soul Restoration Centers for Black Joy

"At LatinoBuilt, we understand the weight that our recommendations carry. We do not give them lightly. We consider not just the technical capabilities of a company, but also their values, their commitment to the community, and their track record. BBP and Stacy and Witbeck's commitment to working with COBID certified firms on their construction projects is a clear demonstration of their dedication to diversity and inclusion. This practice not only contributes to the economic growth of our community but also sends a powerful message to the industry about the importance of providing equal opportunities to all."
George Carillo, Executive Director, LatinoBuilt

b. Commitment to Support

We are fully committed to providing the services described in this preliminary plan and carrying through on commitments made. In addition to Faye as our Diversity Administrator, we have added Workforce Development Coordinator, Julie Greb and DBE/EEO Compliance Coordinator, Inna Mishchuk, who will play a role in providing technical and administrative support to subcontractors. This experienced trio of experts will strengthen our overall support efforts for firms participating on this project. Their understanding of local expectations, relationships with Project Team members Johnell Bell and Monika Johnson, and trust built with the local community will greatly improve the quality of administrative, technical, and other support our team is able to provide to subcontractors.

c. Opportunities Identified

Although we firmly believe that DBE subcontractors can develop skills on any scope and are fully committed to working with DBE subcontractors to do so, the following are preliminary scopes we have identified as excellent opportunities for mentorship:

- ✓ Bascule control house buildout
- ✓ Bridge demolition
- ✓ Streetscape transitions at abutments
- ✓ Concrete reinforcing steel
- ✓ Bridge curb and barrier rail
- ✓ Site restoration
- ✓ Bridge and concrete surface painting
- ✓ Bridge electrical
- ✓ Bridge landscaping

We have provided opportunities for many subcontractors to manage entire scopes, during pre-construction and construction, with our assistance. This opportunity, sometimes referred to as Mini-Primes, offers valuable experience for future work. We have recently provided opportunities on:

- ✓ Luuwit View Park Project for the CoP, where Raimore Construction was included in pre-construction and construction to manage the entirety of the pavilion structure and restroom building scopes
- ✓ Portland Open Space Sequences Project, where Affordable Electric was included during pre-construction to perform site investigation in support of the final design. Affordable Electric was later awarded a construction contract to install a host of complex lighting retrofit upgrades.

- ✓ Parklane Park for the CoP, where Valley Growers is currently participating in pre-construction to progress the design and iterative estimates from 30% to 90%.
- ✓ TriMet's MAX Red Line, where O'Neill Construction Group is succeeding in a sizable mini-prime role while also building smaller lower tier DBE firms.

Any Mini-Prime opportunities put forth by the team would be agreed to by the Agency. We have found that this is great way to take a DBE contractor to the next level within a supportive environment.

1.4.4 – POSITIVE JOB SITE CULTURE

BBP is committed to cultivating and protecting a safe work place for all individuals on the Project, free from harassment, bullying, or hazing. We place a great emphasis on a diverse workforce where individuals are both psychologically and physically safe in their roles. To promote this culture on-site, we will:

- ✓ Leverage the AGC's Culture of Care and Rise Up trainings and partnerships
- ✓ Participate in special-interest groups, like BuildOUT
- ✓ Implement robust onboarding process for staff and craft, including modules on hazing, harassment, bullying, implicit bias, and communication
- ✓ Provide continual leadership training for foremen and supervision
- ✓ Pair apprentices with seasoned, trusted mentors
- ✓ Continue to emphasize mental health support services through safety programs such as craft-led CREW360 safety program
- ✓ Administer a structured policy for staff and craft to address reports of harassment, bullying, or hazing
- ✓ Jointly celebrate successes like milestones with BBQs and food trucks
- ✓ Swiftly implement corrective actions if issues are identified and communicate changes via appropriate channels
- ✓ Host team building activities and events
- ✓ Participate in national awareness weeks, such as Safety Week, Women in Construction Week, Black History Month, Pride, etc.
- ✓ Provide anonymous reporting tools like hotlines and QR codes
- ✓ Ensure project leadership maintain positive, Project-First approach when communicating with the team
- ✓ Communicate and ensure that there are zero repercussions for voicing concerns or reporting incidents
- ✓ Implement a craft recognition program
- ✓ Facilitate ERG Groups (potentially for Women, Apprentices, etc.)
- ✓ Implement an EEO Task Group led by Faye and Jennifer to evaluate progress and adjust as necessary

These methods will be incorporated into our Acceptable Worksite Program, which will be developed by Faye, Jennifer, Julie, Steve W., Steve C., and the Project Team.

BBP participates in ongoing project-specific efforts to promote a psychologically and physically safe worksite. In Portland, Stacy and Witbeck's craft and staff, including subcontractors, participate in Construction Inclusion Week and trainings like RISE Up 4 Equity.

1.4.5 – EXPERIENCE CREATING EQUITABLE AND SAFE OPPORTUNITIES TO WORK

BBP is well-accustomed to working on projects to administer PLAs and other labor agreements throughout Oregon and the country. A few examples of our experiences are included below.

Both Traylor and AB worked together on the Tappan Zee Bridge project which had an extensive PLA that avoided costly delays due to potential strikes, walkouts, picketing, and other disruptions arising from work disputes and promoted labor harmony and peace for the duration of the seven-year project. The PLA standardized the terms and conditions governing the labor on the project and ensured a reliable source of skilled and experienced labor. The PLA also permitted wide flexibility in work scheduling, and shift hours and time. The PLA incorporated three different trade councils and 30 local Unions under one agreement and covered more than 7,000,000 craft workerhours.

Similarly, Stacy and Witbeck's work in Seattle, which totals more than $2 billion in the last 12 years, has all been performed using PLAs. As Project Manager on the University Link (U830) Light Rail project, Steve W. was responsible for administering the PLA for the contract. There were two non-Union firms on the project, which required additional coordination with Union partners. Steve W. and the team discussed these scopes at the weekly PLA meetings and reached agreements where the applicable Unions would provide additional labor to supplement the crews of the non-Union contractors. These Union firms made fringe benefit payments for their non-Union employees to the respective local Union as part of the PLA requirements.

On this project, the Joint Administrative Committee (JAC) was engaged promptly to solve a jurisdictional dispute between the carpenters and cement masons related to installation of concrete forms. Steve W. undertook a consensus building effort prior to the JAC meeting to harmoniously solve the issue prior to the meeting wherein the JAC decision was just a formality. **The JAC decision has stood for over 10 years proving that the process and Steve W.'s involvement supports effective, peaceful relations!**

Perhaps most importantly, Faye was the DMWSDVESB Coordinator on the Agency's Central Courthouse project, which included a PLA. This experience is directly applicable to the Project. Faye supported COBID firms through the process, which included many firms becoming Union. Faye helped answer questions, connect firms with resources, and walk through initial trepidation about transitioning to Union work. For the firms that remained non-Union, Faye was able to work with the various Union's business agents through the Labor-Management-Community Committee meetings to allow the non-Union firms to participate in the project.

We have noted that the PLA in Attachment 3 includes a provision to encourage representatives from outreach organizations in the area, such as PBDG, NAMC-Oregon, and LatinoBuilt. We applaud the Agency for allowing these organizations to be active participants, and our experience has shown that involvement from industry partners has major benefits in creating harmonious relations. We are confident that this partnership between the Unions and these industry partners, supported by the Project Team, will bolster the benefits of the Project on the community.

Multnomah County

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