



Connections

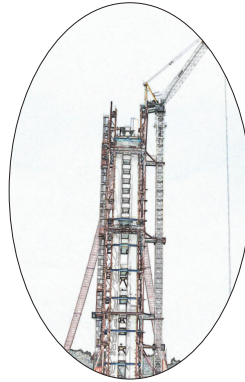
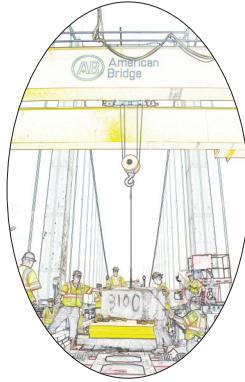
Walt
Whitman
Bridge
REHABILITATION
Philadelphia, PA

Walt Whitman Bridge

WINTER 2012

4 HIGHLIGHT

Walt Whitman Bridge
Rehabilitation



New Hires 3 AB is hiring despite the economy

Dick Foster retires after 44 years AB

Current Contracts KS City District's first contract

Human Resources/Wellness 13 grand prize raffle winner

Interview with CEO 14 after Mike Flowers' first year

Flashbacks 18 1913 lift bridge still in use today

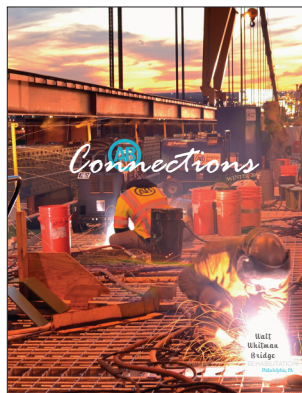
AB Published 19 SAS in the past and present

Safety Committee 22 updates for the new year

thank you

Much appreciation to the following individuals
for their contribution to this issue:

Bill Batzel
Bill Felker
Mike Flowers
Michael Hartranft
Mark Sharin
Jim Thornton



COVER

Ironworkers weld the new steel grid deck panels together on the Walt Whitman Bridge, Philadelphia, PA; flip the page to read about this AB project which is full of unique and challenging aspects.

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<http://www.americanbridge.net/Media/newsletters.php>



Connections
NEWSLETTER

By *Kati Camardese*

Please contact the
Communications and Marketing Department
with news and inquiries:

kcamardese@americanbridge.net

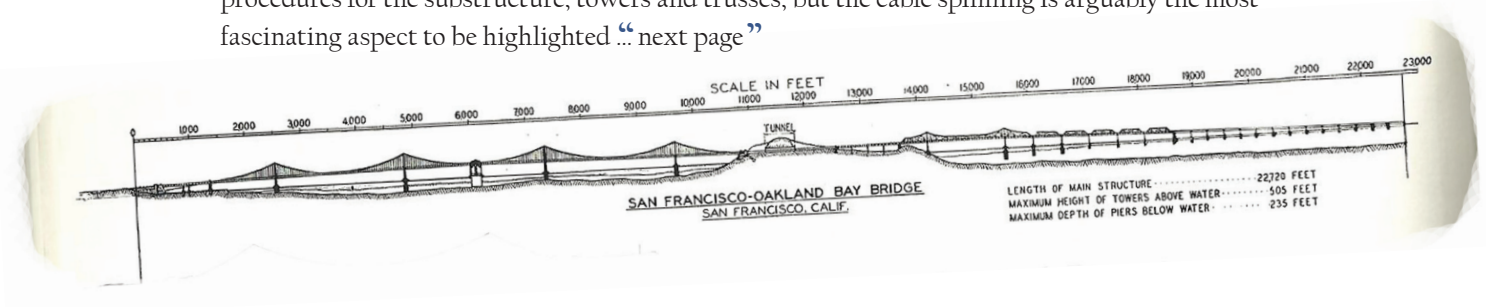
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The San Francisco/Oakland Bay Bridge, copyright 1936, by American Bridge Company

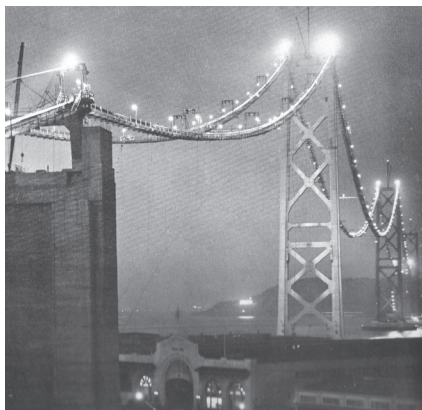
Fans of the San Francisco/Oakland Bay Bridge could buy a copy of the erection schematics published by American Bridge Company for one dollar per copy when the structure opened in 1936. Worth a lot more (nostalgia) 75 years later, we recently found a copy tucked away in the company archives. This bridge has been the subject of *AB Connections* Published section more than once before - can one fault the many authors who have dedicated their research and writings to this engineering marvel?

In 1856, for most, it was impossible to imagine a bridge with a 22,720' main structure length connecting the west portion of the bay, San Francisco, and Yerba Buena Island. However, this is when gold rush pioneers first envisioned expansion of mobility and economic opportunity in the area. The book delves into more historical and geographical information as well as technical construction procedures for the substructure, towers and trusses, but the cable spinning is arguably the most fascinating aspect to be highlighted "...next page"



current project update

Electric lights on footwalks made it possible to spin cables at night. Weather permitting, work was undertaken 24 hours per day with a break from Saturday afternoon through Monday morning



The American Bridge/Fluor Joint Venture began stringing cables on the new Self-Anchored Suspension Span of the San Francisco/Oakland Bay Bridge on December 20, 2011

newhires

Mark Hines, Estimator, American Bridge Manufacturing, Reedsport
Mathias Schramer, Chief Administrator Officer to the Board
Roger Northern, Survey Manager, Forth Replacement Crossing, Scotland
Glen Stratmann, Crane Operator, Container Yard Shoreline Protection Works, Bahamas
Brent Puller, Senior Accountant, Headquarters Accounting Department

dickfoster

As a tribute to his 44 years of service at American Bridge, a luncheon was held in Dick Foster's honor upon his retirement on December, 31 2011. Dick started with the American Bridge Division of United States Steel Corporation in 1967 as a time keeper, traveling across the country working in the field on projects such as the New Orleans Super Dome, the Inner Harbor Vertical Lift Bridge and the Pittsburgh PNC Office Building. Except for a stint as office manager on the Florida Avenue Bridge project in New Orleans from 2003-2005, Dickie has worked in the corporate accounting department since 1980. Dick was emblematic of the AB culture, always undertaking his work with competence, pride, and a can-do attitude. His ready smile and cheerful disposition will be missed along with his contributions to the efficiency of the AB accounting operation. Dick plans to spend his retirement years with his wife and family in South Carolina. American Bridge would like to thank Dick for his loyalty to the company and wish him a most enjoyable retirement.



currentcontracts

NEW YORK

Throgs Neck Bridge Structural Retrofits, New York City
Bronx Whitestone Bridge Structural Retrofits, New York City
Ogdensburg-Prescott International Bridge Main Span Rehabilitation, Ogdensburg, NY
Walt Whitman Deck Replacement, Philadelphia, PA
George Washington Bridge Rehabilitation, New York City
Robert F. Kennedy Bridge Structural Improvements, New York City

PITTSBURGH

Charleroi-Monessen Bridge Replacement, Charleroi, PA
Columbus Road Lift Bridge, Cleveland, OH

SPECIAL AND INTERNATIONAL PROJECTS

Forth Replacement Crossing, Scotland, United Kingdom
Las Vegas High Roller Observation Wheel, NV

RICHMOND

Chincoteague Bridge, Chincoteague, VA
Pier R3 Repairs, Yorktown, VA
Pier 3I, Groton, CT
Bulkhead at NOAA Marine Operations Center, Norfolk, VA
Wrightsville Beach Bridge, Wrightsville, NC

TAMPA

Platt Street Bridge Major Repairs, Tampa, FL
Red Bug Lake Road Pedestrian Overpass, Oviedo, FL
Arawak Cay Port Development Phase II, Nassau, Bahamas
Castaway Cay Hurricane Irene Emergency Repairs, Castaway Cay, Bahamas
Container Yard Shoreline Protection Works, Freeport, Bahamas

WESTERN

ABFJV San Francisco/Oakland Bay Bridge, CA

KANSAS CITY

Hurricane Deck Bridge, Camdenton, MO

MANUFACTURING

Walt Whitman Bridge, Philadelphia, PA
PJ McArdle Viaduct, Pittsburgh, PA
Clearfield County Plate Girder Bridge, Kylertown, PA
Shore Parkway, Queens, NY
Cochran Mills Bridge, Armstrong County, PA
Sun Valley Bridge Widening, Los Angeles, CA
4th Avenue Bridge, Johnstown, PA
Wilson Creek Bridge, Marshall, AK
George Washington Bridge Deck Replacement, New York, NY
Dickey Prairie Road Bridge, Clackamas County, OR
I-80 Bridges, Clarion County, PA
Route 65 Bridge Rehabilitation, Pittsburgh, PA
Montour Trail Bridges, Washington County, PA
Trinity County Bridges, Trinity County, CA
OPT Cofferdams, Reedsport, OR
Flamingo Loading Docks, Las Vegas, NV
Mansfield Bridge Rehabilitation, Allegheny County, PA
Ambridge/Aliquippa Bridge Rehabilitation, Beaver County, PA
Blacklegs Creek Bridge, Indiana County, PA
Columbus Road Lift Bridge, Cleveland, OH
East Pine Street Bridge, Snyder County, PA
Cherry Tree Bridge, Indiana County, PA

waltwhitman

Suspension Span and Anchorage Span
Deck Replacement
Article and photography by Project Engineer Jim Thornton

In early January 2012, American Bridge will complete Stage One of the Suspension Span and Anchorage Span Deck Replacement on the Walt Whitman Bridge. The \$128M contract was awarded in July of 2010, and will be the largest capital improvement project ever undertaken by owner Delaware River Port Authority (DRPA).



The Walt Whitman Bridge, originally built by American Bridge in 1957 and designed by renowned engineer Othmar Ammann, carries 120,000 vehicles daily between Philadelphia, Pennsylvania and Southern New Jersey on Interstate-76. The bridge serves as the primary route for daily city commuters coming in and out of the city, sports fans traveling to the Sports Complex in South Philadelphia, and vacationers heading to the Jersey Shore throughout the summer months. After 50 years of heavy use, the 3,540' suspension bridge was badly in need of repairs. To minimize impact to the traveling public, the project is being conducted over the course of seven long-term stages, replacing one lane of the bridge at a time.

AB's scope of work includes removing and replacing 271,000SF of existing grid deck and stringers, as well as replacing the top lateral bracing, installing new movable barrier, floor truss strengthening, new elastomeric bearings, new expansion joints, sidewalks, drainage grating, steel barriers and concrete parapets, temporary stringer installation, ladder relocations, modification to under deck maintenance walkways and the main cable saddle enclosures. Subcontract work includes replacing existing light poles, power, lighting and high-voltage lines, modifying fire department dry standpipes, partial cleaning and painting of the stiffening truss and top chords, and sawcutting the existing deck sections.

PROJECT TEAM

Kwadwo Osei-Akoto, Vice President New York District
Dan Bell, Operations Manager
Dan Murphy, Project Manager
George Terrance, Superintendent
Dave Geesaman, Civil Superintendent
Jim Thornton, Project Engineer
Zach Rosswog, Field Engineer
Michael Hartranft, Field Engineer
Drew Merritts, Field Engineer
Bill Batzel, Field Engineer
Joe Stilson, Field Engineer
Kara Mullin, Field Engineer
Zach Osei, Field Engineer
Pete Bereza, Safety Manager New York District
Mark Sharin, Safety Manager
Mike Rambus, Ironworker General Foreman

TEMPORARY WORK PLATFORM

Access to the underside of the bridge was achieved through the installation of a temporary work platform. AB employed an innovative cable-suspended platform designed and erected specifically for this project, consisting of 20 gauge steel deck pans fastened to and supported by a wire rope suspension system installed the length of the bridge, and incrementally supported with tie-up cables at every floor truss.

AB strategically placed the platform 5'-6" below the existing deck allowing employees to comfortably perform their work tasks and minimize the need for fall protection. Designed in accordance with AASHTO and ASCE-7-02 standards, the temporary work platform not only serves as a debris shield to the marine traffic and the shipping terminals located below the bridge, but has also been designed to support the loads of the various structural members being replaced. AB Project Manager Dan Murphy acknowledges that "the Safespan system has been a valuable commodity for us, providing better access to the underside of the bridge, thereby increasing our productivity and virtually eliminating fall protection and falling object concerns." Workers access the platform via two 130' stair towers located at either anchorage, and are not dependent on lane closures to begin their shift.



Erection of the gantry crane legs with the 15-ton Tadano crane



Ironworkers installing new top lateral bracing members during the advanced work stage from the temporary work platform

According to the Graham Company,
AB has the best compliance of PPE on any DRPA project
...higher level than expected.

SAFETY by Safety Manager Mark Sharin

The Walt Whitman Project is being operated under an Owner Controlled Insurance Program (OCIP), with specific safety requirements that in many cases exceed current federal, state and local safety standards. The DRPA utilizes a multi-level safety team comprised of their own in-house safety personnel as well as utilizing the services of their insurance broker's safety consultants. The DRPA's insurance broker, The Graham Company, has representatives on-site a minimum of twice a week for inspections that can last several hours. These site inspections are always accompanied by American Bridge's safety representative and often by one of AB's field engineers. Having the field engineers involved in the site inspections helps ensure that both operations and safety are carefully considered in each assigned task. The Graham Company reports their findings in writing to the DRPA weekly to which American Bridge is required to respond in writing. AB has welcomed this scrutiny and uses it as a tool to reinforce American Bridge's in-house safety program both on this jobsite and corporately.

This is a high profile job by virtue of its location and that it is the largest project contracted by the DRPA. AB is under very close observation, however, this alone is not the driving force of our site safety program. The true focus on safety comes from the management team led by Project Manager Dan Murphy, Operations Manager Dan Bell, Superintendents George Terrance and Dave Geesaman along with the efforts of all the field engineers. Invaluable input and support is

also supplied by New York District Safety Manager Pete Bereza. When a safety culture is presented and encouraged by a unified management team it is more readily accepted and embraced by the foremen and their crews.

The potential hazards associated with working on suspension bridge rehabilitation projects are abundant. Our crews are equipped with and well trained in the use of any necessary personal protective equipment (PPE). Many work operations involve rivet busting, grinding,

mag-drilling and torch cutting inside the steel floor truss box beams, increasing the likelihood for injury from shavings, dirt and debris. The AB team reviewed the issue of debris in employee's eyes, and decided to replace conventional safety glasses with foam lined hybrid style – just one example of how AB is working to reduce worker exposure to injuries. American Bridge has received praise and even been used as a model of good safety practice on other DRPA projects in the region. In a recent bi-weekly safety meeting, Jeff Spatz of the Graham Company commented on AB's level of safety compliance as “the best compliance of PPE on any DRPA project...higher level than expected.”

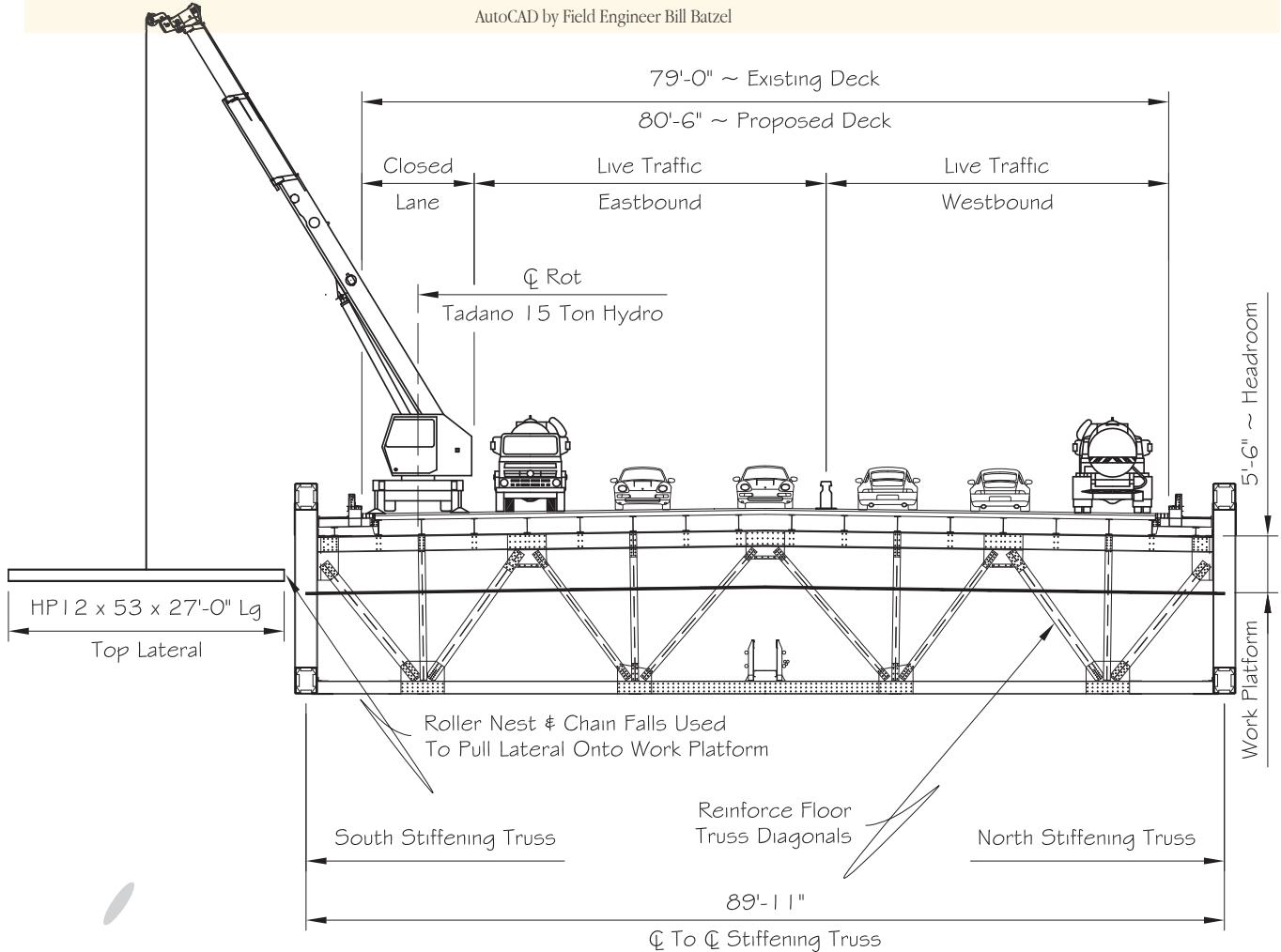
This praise is largely due to the strong and unwavering support of the AB project team, making safety compliance the normal way of working. All members of the management team continually enforce all applicable OSHA standards along with AB and DRPA safety policies, first by example and then by direction.

“The Safespan system has been a valuable commodity for us, providing better access to the underside of the bridge, thereby increasing our productivity and virtually eliminating fall protection and falling object concerns.”

Project Manager Dan Murphy

PRE-STAGE CONSTRUCTION: SINGLE DAILY LANE CLOSURES

AutoCAD by Field Engineer Bill Batzel



INNOVATIVE ERECTION PROCEDURES UNDER LIVE TRAFFIC

The replacement of the existing top lateral bracing members had to be performed as part of the advanced work stage (prior to any demolition of existing deck). Advanced work was performed during normal work hours under live traffic conditions, utilizing temporary single lane closures. Daily lane closures are only permitted during off-peak hours, between 9:30 a.m. and 2:30 p.m., to minimize impact to the traveling public. With extensive experience working for American Bridge in New York, Superintendent George Terrance worked with the project team to develop innovative erection procedures utilizing special equipment such as 15 ton Tadano cranes, tow behind trailers and specific rigging schemes to work efficiently within single lane closures adjacent to live traffic. Use of the 15 ton Tadano crane has become common practice on AB-NY projects, as it has a small footprint (6'-7") ideal for working in tight quarters.

American Bridge Manufacturing (ABM) fabricated 377 tons of structural steel for the new top lateral bracing system. ABM Project Manager Dave Partazana worked closely with the project team to ensure fabrication and delivery schedules were met and all truck loads were stacked according to AB's field erection procedures. Using the 15 ton Tadano, all of the new 27' long HP12 x 53 laterals were quickly off-loaded within the confines of a single lane closure. Laterals were picked directly off flatbed trailers and flown over the side of the stiffening truss, where workers waiting on the work platform below re-hooked the piece and pulled it into position with chainfalls supported on Hillman roller conveyors. The existing laterals were removed in the same fashion under live traffic conditions.

After several iterations we came up with a design that allowed overhang brackets to simply hook to the stiffening truss top chord. This streamlined the entire erection process.

Field Engineer Bill Batzel

The Graham Company hailed AB's operation as one of the very best or the best {ever} witnessed from a planning, coordination, and execution standpoint; it was orchestrated with military-like precision."

OVERHEAD GANTRY CRANES

To overcome lane closure and work zone restrictions imposed by the DRPA, American Bridge is utilizing three overhead gantry cranes, one in each span (Pennsylvania side span, mainspan; and New Jersey side span). These versatile cranes are not only capable of traveling the full length of their span, but can also trolley the full width of the deck, making them invaluable to AB throughout each of the seven construction stages. Utilizing overhead gantry cranes on redecking projects is not a new concept to American Bridge; the Triborough Bridge Deck Replacement (2001-2005) was the first time an overhead gantry crane was used to replace suspension bridge sections in the United States, and then AB again incorporated overhead gantry cranes for the Ogdensburg-Prescott Bridge Deck Replacement (2010-2011).

However, unlike those two bridges where the top chord of the stiffening truss is significantly above the deck, the Walt Whitman top chord is only a few feet above the deck, necessitating the design of additional 15' crane legs to keep the overhead box girders well above minimum vertical clearances. In addition to crane legs, the gantry cranes

are supported by temporary runway beams and overhang brackets, a system entirely engineered in-house

by American Bridge. Field Engineer Bill Batzel explains, "Before Stanley Walker retired, he and I worked closely together to design a gantry crane runway system that was both simple to fabricate and practical to install. Over 300 brackets were needed along the stiffening truss to simply support the 22' long runway beams; thus rivet busting or mag-drilling holes at each location would have been too time consuming and costly. After several iterations we came up with a design that allowed overhang brackets to simply hook to the stiffening truss top chord. This streamlined the entire erection process." All material for the crane runway was fabricated by ABM and shop assembled so that the brackets and beams could be

One of the most challenging operations to date was the erection of the six 86'-8" long gantry crane box girders, which American Bridge completed within a single four-hour night time full-bridge shutdown.

Project Engineer Jim Spradon



George Terrance and Mike Rambus oversee gantry load test

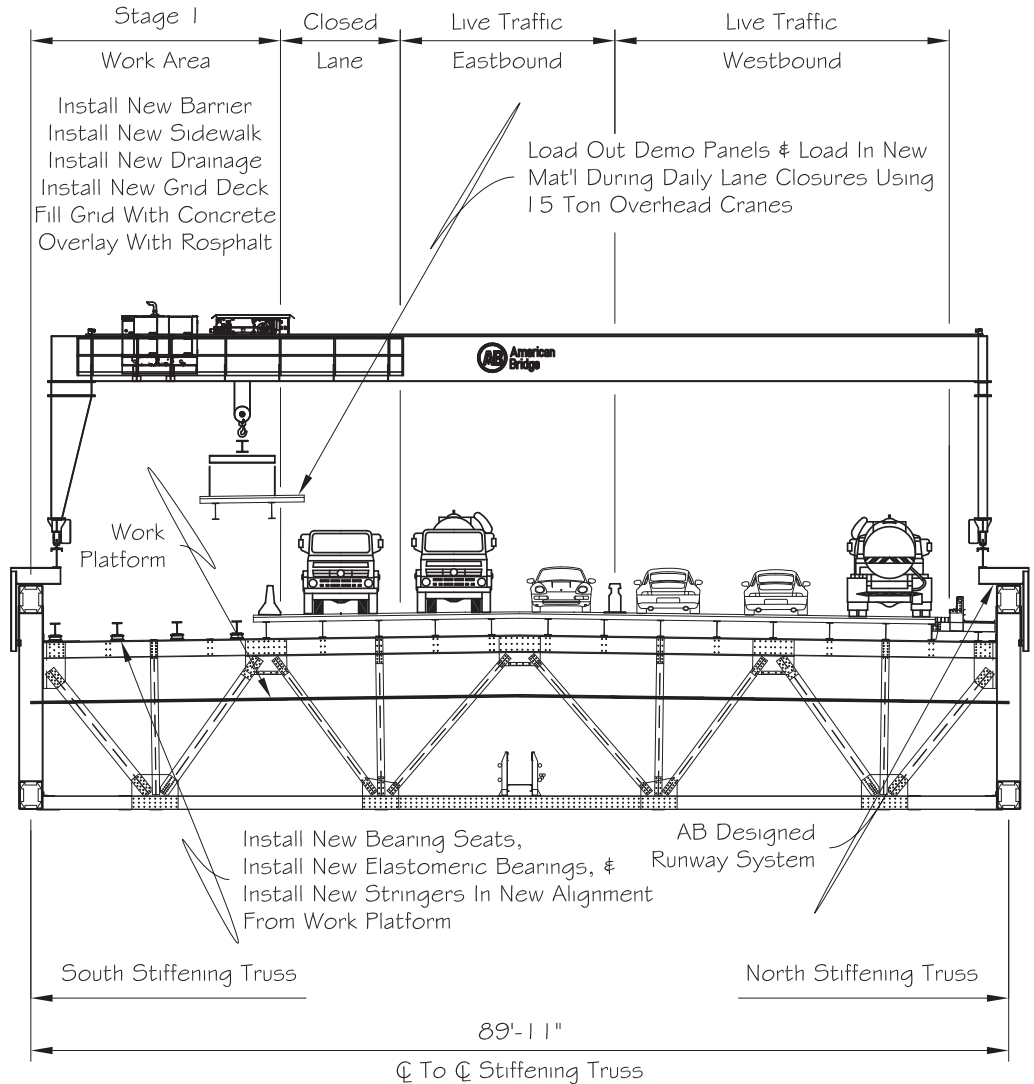


Superintendent George Terrance and General Foreman Mike Rambus oversee erection of the 86'-8" gantry crane box girders; AB set the six girders during one, four-hour, full-bridge shutdown

American Bridge Manufacturing fabricated 400 tons of temporary material for the gantry crane runway system, including 338 overhang bracket assemblies, and 6,838LF of built-up runway beams.

directly offloaded on the bridge and set in place with the 15 ton Tadano, avoiding costly double handling and onsite assembly.

One of the most challenging operations to date was the erection of the six 86'- 8" long gantry crane box girders, which American Bridge completed within a single four-hour night time full-bridge shutdown. The four-hour time frame was coordinated with the DRPA, and was the first time in the 54 year history of the bridge that a full traffic closure was made. The Authority allowed this special request for a full bridge closure based on American Bridge's detailed crane erection plan and past MPT performance on the project. George Terrance and Bill Batzel worked with the AB Engineering Department to design a temporary support system to hold the crane legs upright, until the girders could be placed. The operation was an entire team effort, from developing the hoist plans, to surveying the crane rails, coordinating the complex MPT arrangement, directing the oversized trailer loads, crane setup and special rigging configurations. George and AB Ironworker General Foreman, Mike Rambus, orchestrated the massive crane picks utilizing 100 ton hydraulic truck cranes at each gantry location. The operation was completed without any disruptions and easily within the time frame. The DRPA received zero complaints from the traveling public of the shutdown and American Bridge received high praise from the Authority for the successful completion of the girder erection. Jeff Spatz of the Graham Company hailed the operation as "one of the very best or *the* best that I have witnessed from a planning, coordination, and execution standpoint; it was orchestrated with military-like precision."



STAGE I CONSTRUCTION: PERMANENT LANE CLOSURE AND SINGLE DAY LANE CLOSURES
AutoCAD by Field Engineer Bill Batzel

FLOATING DECK DESIGN

One of the unique aspects of this project is the “floating deck” concept being utilized for the new deck. The existing grid deck is being replaced with a modern steel grid deck filled with lightweight concrete. In addition to being lighter, the new bridge deck will not have relief joints (except at the towers and anchorages); thus eliminating 26 existing joints currently spaced every 120’ of the suspended span. Removing the relief joints will prevent run-off from reaching the sub-framing and corroding the floor trusses and stringers, which was one of the primary reasons the existing deck needed to be replaced.

To accommodate the differential longitudinal movements between the deck and the stiffening trusses; the new design calls for the installation of over 3,100 elastomeric bearings underneath the new stringers, which allow the deck to “float” independently. According to

“Completing the concrete pours and laying asphalt before the plants shut down for winter was the key to meeting our project milestones.”

Operations Manager Dan Bell

AECOM, this is the first floating deck to be installed on a suspension bridge. At each floor truss the new stringers sit on unique custom molded elastomeric bearings. The concept of the floating deck relies on varying the stiffness of the bearings, allowing for thermal expansion and contraction in the suspended deck through deformation of the bearing. The expansion and contraction is controlled by strategically placing laminated (bonded) bearings near the center of each span, and low-friction sliding type bearings near the ends of each span. Each bearing assembly stands 5-3/4” tall, and is comprised of a composite of natural

rubber and internal steel shim plates, vulcanized between a 1” top sole plate that bolts to the bottom flange of the new stringer, and a 1” base plate that bolts to the top of the existing floor truss. The internal steel shim plates increase both the vertical bearing capacity and the amount of horizontal



View of the new deck (Stage 1), as seen from the top of the NJ tower

According to AECOM, this is the first floating deck to be installed on a suspension bridge.

deflection the bearing can withstand. The sliding bearings are a two piece assembly, where the top sole plate is fixed to the stringer, and elastomer and base plate are fixed to the floor truss.

A low-friction sliding surface comprised of a stainless steel plate on top, and a PTFE dimple lubricated plate on bottom, allow horizontal displacements up to 1" at each sliding bearing assembly.

Temporary keeper plates are used to lock the sliding bearings in place until all 3,100 bearings have been installed and ready to uniformly displace under the new deck loading. According to AECOM, the new floating deck system is expected to have at least 75 years of continued service, with minimal maintenance required on the sliding bearings every 25 years.

One of the challenging aspects for American Bridge during Stage I has been aligning the new stringer system and accommodating movement in the bridge due to the new floating design. In order to minimize bearing deformation and stay within tight erection tolerances of 1/8", AB had to continually make

One of the challenging aspects for American Bridge during Stage I has been aligning the new stringer system and accommodating movement in the bridge due to the new floating design.

Project Engineer Jim Spindler

impromptu adjustments to stringer splice plate dimensions. Field Engineer Zach Rosswog and I worked very closely with the ironworker

crews as they set and aligned the new 60' stringers through:

carefully monitoring any deformations in the bearings during the erection process, expediting the fabrication of new stringer splice plates as needed, avoiding costly delays to trailing work activities such as installation, and alignment and field welding of the grid deck panels.

The new steel grid deck is comprised of over 2,800 segmental panels, which sit flush on the top

flange of the new stringers, and bolt into each of the sidewalk diaphragms. Field Engineer Michael Hartranft coordinated the fabrication and delivery the 400 grid panels that were offloaded directly from the delivery trucks during temporary lane closures.



Field Engineer Kara Mullin watches as AB Ironworkers set new finger joint section at the NJ tower, using a 15 ton Tadano crane



Field Engineers Michael Hartranft and Drew Merritts examine the new deck as workers pave Rosphalt overlay

ALIGNMENT AND WELDING OF GRID PANELS by Field Engineer Mike Hartranft

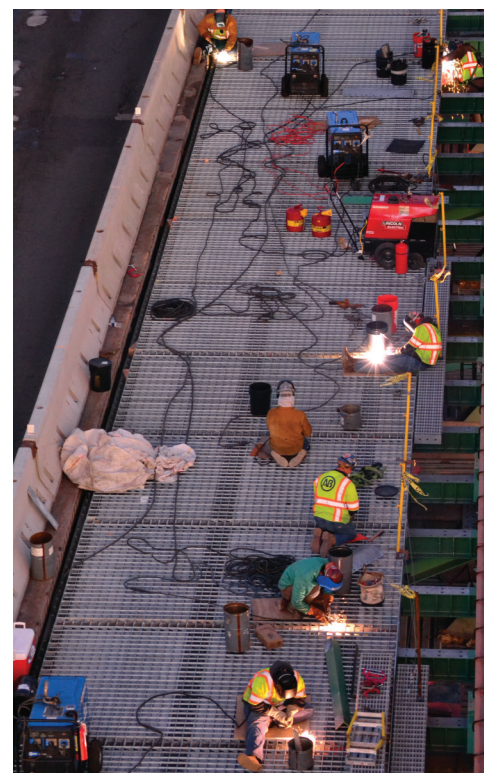
The alignment of the grid panels in the beginning stage was extremely important to the subsequent stage work; especially Stage 4 (where panels have a transverse vertical curve) and Stage 7 (the final stage). To properly set the longitudinal edge of the Stage 1 panels AB field engineers set a survey line based off the project survey baseline. This survey line was then used by the crews in the field to install and align the panels. It was important to use the project base line to set the panels instead of just matching the panels to the centerline of stringer due to any warping or other tolerance issues between the existing bridge and the new bearings and stringers.

While the panel alignment crew completed panel installation, a second crew worked on completing the over 30,000 welds that tie each stage of grid deck together. AB elected to use a welding electrode that can be utilized on galvanized material without the need to remove the galvanizing and clean the metal, significantly reducing the labor needs and schedule impact of the operation.

Once final alignment and welding was completed, AB carpenters and laborers formed and poured the deck in 120' segments. The new wearing surface was placed in early December using a high performance asphalt mix, a unique product that includes a concentrated thermoplastic additive creating a waterproof wearing surface which is resistant to both rutting and shoving. According to AECOM this is the first time this material has been used on a suspended span of this size; the DRPA is eager to see how the new surface holds up to the heavy traffic experienced on the Walt Whitman Bridge.

CURRENT

American Bridge crews are currently underway with Stage 2 demolition. With substantial completion of Stage 1 being granted in late January, the entire AB project team is to be commended on their efforts at bringing Stage 1 in ahead of schedule. 🍷



Ironworkers weld the new grid deck for Stage 1

humanresources

Grand Prize Raffle, 2011

The 2011 Wellness Program has come to an end. We had great participation for this year. Great job to all that participated!

The grand prize raffle was held on Wednesday, January 11, 2012. Anne Royster, from the Richmond office, was the big winner. Congratulations Anne!

The 2012 Wellness Program has been launched. Overview, wellness certificate, and points checklist can all be found on the Access site or by contacting the HR (Human Resources) Department.

Coming Months


Here is what you can look forward to over the next couple of months with the wellness program:

FEBRUARY – The HR Department will send out correspondence regarding the first newsletter campaign of 2012 in early February, called *Eat Well for Life*. It lasts eight weeks and is designed to help raise awareness of your current eating behaviors. You will receive 10 wellness points for signing up for this newsletter campaign.

Also in February, sign up for any or all of the four Health on the Menu Video Workshops: *What's on Your Plate*, *Suspending Stress*, *Keys to Ergonomics*, and *Eating for Health: Five Must Do's*. They are approximately 30 minutes in length. To obtain points, you must complete a feedback survey regarding the video. If you would like any of these videos, please contact the HR Department. February is not the only month to view the videos. You can do this any time during the year.

MARCH – Our focus for March is the *HealthMedia SUCCEED Wellness Profile* through Highmark. This assessment will help you understand what steps you can take to improve or maintain your health by creating a personal healthy lifestyle plan customized to your individual needs. It also provides valuable information that you can share with your personal physician. Your privacy is very important and this assessment is completely confidential and adheres to all HIPAA regulations. If at any time you are uncomfortable completing a

question, you may skip over to the next. It can be completed easily on-line and found at www.highmarkbcbs.com. If you completed this assessment last year, you can do it again for 2012. Please note: if you do not have medical insurance through American Bridge Company or you do not have any means of accessing a computer, please let the HR Department know and we can arrange for you to complete a paper version of the wellness profile.

APRIL – The incentive for April will be a *10,000 Steps Challenge*. This is a 12-week program with the goal of working up to taking 10,000 steps a day. Kits, that include a pedometer, will be provided for you if you choose to participate in the program. Information will be sent in mid-March. 

401k Program

All salaried and hourly non-union employees can enroll in the American Bridge Company 401k program at any time. You can also change the percentage you are deferring at any time throughout the year. If you would like an enrollment packet or you need a savings form to update your contribution percentage, please contact the HR department at 412-631-1000.

Preventive Care

Please keep in mind that when you go to get a physical and/or blood work at the doctor, only certain procedures will be covered. Highmark has a preventive schedule which shows all routine covered services. A complete preventive schedule is located on the Access site or by contacting the HR Department. You can always check this schedule to see if the services you are going to receive are covered. If you are ever unsure, please call the member services number located on the back of your Highmark medical insurance card.

Dental Provider

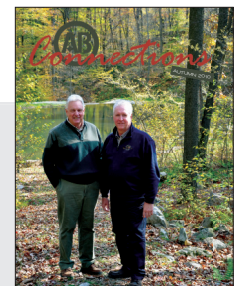
As of January 1, 2012, the company's dental provider has changed to Delta Dental. The new plan is very similar to what the old plan offered, but it has several more enhanced benefits. Salaried and non-union hourly employees should have received their new dental cards in mid-December. If you did not receive your cards, please contact the HR Department. If you need to locate a providing dentist, go to www.deltadentalins.com.

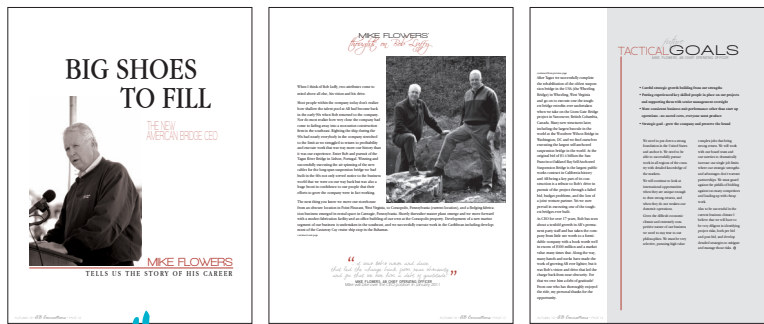
interview
with the CEO



BIG SHOES FILLED

In December of 2010, AB Connections covered Michael Flowers' career as he stepped in as American Bridge President and CEO. One year later, we revisit with Michael to bring readers a summary of the progress made on the tactical goals he expressed to us last year including issues of rather controversial topics such as economics, domestic and foreign markets, and fabrication debates.





“During my time on the Bay Bridge project there is one question that nobody was ever able to answer ...”

AB Connections: When we met last year you stated: ‘Given the difficult economic climate and extremely competitive nature of our business we need to stay true to our philosophies. We must be very selective, pursuing high value complex jobs that bring strong return.’ – Can you give the readers some examples of steps being taken by the company to continue growth and a strong workforce?

Michael: Our Board of Directors has set forth their expectations for sustained growth of ABHC (American Bridge Holding Company) in these tough times. For the last few months, AB’s senior management team has undertaken a detailed, introspective review of our strengths and weaknesses with both a parochial and a holistic view towards a complete update of our strategic plan. Our new plan will take into account overall market analysis including project funding trends,

governmental spending and economic growth, opportunities for partnerships, and geographic expansion as we chart a course for growth over the next three to four years.

With respect to our people, we will continue to handpick the best and brightest engineers from the country’s top-notch universities and empower them with opportunities on our jobs supplementing that “on-the-job” experience with our corporate training program.

AB Connections: A topic of great debate for some time has been U.S. companies hiring international entities for fabricated steel. *AB Connections* (Spring 2011 issue) covered the opinion of Senior Vice President of the Special and International Projects District, Michael Cegelis, in his counterstatement to the front page New York Times article about the sourcing of the fabricated steel from China for the Bay Bridge’s new SAS span. How have you dealt with questioning such as this over the five years you spent at the project before taking over as President and CEO?

Michael: During my time on the Bay Bridge project there is one question that no one was ever able to effectively answer: “Tell me who was going to supply the steel for the San Francisco/Oakland Bay Bridge domestically? – Just give me the name of the company, because nobody here [in the U.S.] ever even bid it!” It is my belief that if the project was rebid tomorrow, in the presence of all criticisms, an identical situation would be in place. Given the same project scope, a requirement of a low price to win the bid, and the required timeframe for completion of the project, the same outcome would occur. The United States simply no longer has the capacity to produce enough fabricated steel in a short amount of time that is needed for a job of this scale. The U.S. fabrication industry has transitioned in response to

changes in the U.S. economy and marketplace, and continues to be responsive in providing competitive, high quality fabricated product for most of the normal needs of the construction sector. This transition has naturally resulted in the reduction of domestic capacity for high tonnage, fast delivery orders, and the result is the need to go offshore in some instances. When procurement is unrestricted, we have and will continue to buy fabricated steel from the global source that best responds to the needs of the project and the client, whether it be from the United States, Asia, Europe, or South America. Lacking reauthorization of a long term Federal Transportation and Infrastructure Strategy promises to only make this capacity shortfall worse.

AB Connections: On this same subject, let me throw in another factor – If time was not an issue, then would the American Bridge/Fluor Joint Venture have called upon U.S. based steel companies for the product?

Michael: In this case it would have to be the combined efforts of four or five companies to execute the job in sections. However what cannot be ignored is public safety. Contract time requirements didn't spawn from wants of an iconic bridge for the bay area, but rather, were required due to the known fact that in the event of an earthquake the San Andreas and/or Hayward Faults could cause the old bridge to collapse. If by employing foreign sources of supply we were able to shorten the time to it took to execute

the job by one day, and that one day happened to be the day of a major earthquake, it is my belief that it would clearly be in the best interests of the public to choose foreign supply and a faster schedule. With 280,000 vehicles crossing the old bridge every day there is great potential for significant loss of life and dramatic impact on the economy of the San Francisco/Oakland area. That is a fact known to every one of our employees on the SAS project and we are driven to complete the new signature span ahead of the next major temblor.

AB Connections: When we spoke last year you expressed – ‘We need to put down a strong foundation in the United States and anchor it. We need to be able to successfully pursue work in all regions of the country with detailed knowledge of the markets.’ – How has this developed in 2011?

Michael: A house built on a weak foundation will not stand and domestic strength remains a key part of American Bridge's strategy. Our regional work has expanded further in 2011 with many new contracts including the Hurricane Deck Bridge in Missouri, our first job awarded to the Kansas City District. Our domestic market, impacted by reductions in funding, is naturally layered with small to medium sized projects along with an increasing number of jobs that are of monumental size, like the Tappan Zee and Bayonne bridges. We will continue to pursue the small and medium sized projects out of our district offices while looking at the larger projects in joint venture partnerships with other high quality contractors. Our small projects will enable us to maintain the detailed knowledge of our geographic markets while offering great developmental

opportunities for our young people.

The viability of many of the mega projects being considered may hinge on the use of private funds through Public/Private Partnerships or PPP's. It is hoped that PPP's will enable larger projects to proceed by providing access to more diverse financial sources and new methods of project packaging and management. Success of the development of PPP's for infrastructure development will likely hinge on changes in laws and development of new means of public procurement. Those challenges have proven difficult as our states are not so “united” in embracing change and developing uniformity. However “necessity is the mother of invention” and the lacking Federal investment strategy is creating a clear necessity that should drive dramatic growth in PPP's.

AB Connections: ‘We will continue to look at international opportunities when they are unique enough to draw strong returns, and when they do not weaken our domestic operations.’ – Do you feel this is the case with the Forth Road Replacement Crossing project recently won by the SIP (Special and International Projects) district?

Michael: In order for AB to grow effectively, our past experience tells us we need to carefully blend a core group of “AB Bluebloods” familiar with our company and culture with new hires, both recent graduates as well as experienced folks looking to join our team. Over time the new hires become “AB Bluebloods” and the cycle repeats itself. This served as the template on the Self-Anchored-Suspension-Span of the Bay Bridge in California which began in 2006, and is being repeated with the Forth Replacement Crossing in Scotland. New hires on SAS have become key members of the AB team and are now leading our

efforts on not only Forth Road but other work as well. I have absolute confidence that through this process of blending of our talent that we will again be successful in meeting the staffing needs for Forth Road. Not only will this not weaken our domestic base, I fully expect Forth Road to broaden our reach internationally and strengthen our brand overseas.

Forth Road, like SAS before it, is simply the next in what I believe will be a series of larger scale mega projects, both national and international, that repeats themselves periodically and serve to strengthen AB well into the future.

"If by employing foreign sources of supply we were able to shorten the time to it took to execute the job by one day ... it is my belief that it would be in the best interests of the public to choose foreign supply and a faster schedule."

AB Connections: One clear item of emphasis in 2011 has been safety. Are you pleased with the progress in this area so far and what initiatives do you foresee for the future?

Michael: Safety is critical to our success. Less than a month after stepping in as President and CEO of American Bridge I sent a company-wide message stating that changes in our safety program were imperative. For many years we out-performed our safety goals; however these targets were set above a national averages, resulting in a below par EMR (Experience Modification Rate). This ratio directly affects insurance premiums and how the company is judged by our customers. These controlling factors of cost and reputation can be the difference between


winning and losing new contracts and can impact whether owners will even allow us to bid work. Change is the message I sent out to AB employees last January and immediately senior management engaged in bringing safety to the forefront, at the highest level of the company where it needs to be. Establishment of the new senior management safety committee was announced at the annual meeting this fall, and that group has set about an aggressive review of our entire safety program intent on changing behavior.

AB Connections: How do you see the markets that AB participates in and what are your near-term expectations?

Michael: Internationally I would expect that the most significant infrastructure growth will be in South America and Asia, and we will carefully monitor those markets and opportunities. There continues to be guarded optimism with select opportunities to participate in major bridge projects in Europe where investments in infrastructure have been made irrespective of the economic problems in countries like Greece, Ireland and Portugal.

The U.S. Congress is so embedded in partisan political debate over control of our national debt that they are missing the boat by growing our economy through transportation and infrastructure investments. Now an election looms in November of 2012 and I hope I'm wrong, but I don't expect reauthorization of SAFETEA-LU until after the election. As a result I expect continued weakness in

our market driving a lot of competition at the low end and lacking funds at the high end.

As a result of the tight market the Tampa District continues to push the limits of their normal geographic boundaries, expanding pursuit into Central America with a recent tender in Panama. Unfortunately we were in the latter stages of negotiations on a project valued well over \$250 million when it was shelved for economic reasons. The Richmond District is also pushing its normal boundaries by its participation in a three party venture for a large Navy project outside Seattle. Modest economic growth is likely to manifest itself in available projects in our marine sector and the expansion of the Panama Canal will sooner or later have an impact in nearly all Caribbean and east coast ports. 



Senior management team in the Bahamas for Robert Luffy's retirement party – from top row, left to right: Michael Cegelis, Amr El Nokali, Richard Kermode, David Simmons, Kwadwo Osei-Akoto, Jake Bidosky, Scott Gammon, Michael Flowers, Robert Luffy. Not pictured: Mark Bell, Pamela Bena and Lanny Frisco.



Lions Gate Bridge Rehabilitation, Vancouver, BC, Canada

10 American Bridge won eight awards for its role as design-builder and general contractor for this suspension bridge reconstruction. The bridge remained fully operational throughout construction, work undertaken during limited nighttime and certain weekend closures. The project included the removal of the entire 40' wide by 2,778' long stiffening through truss, replacement with a 53' by 2,778' deck truss with orthotropic deck, new expansion dams, replacement of 162 hangers, replacement of cable band bolts, the design/build seismic upgrade of north approach viaduct including



ground improvement, pile supported spread footer encasement, steel bent strengthening, new deck girder diaphragms, restrainer installation and abutment bearing replacement; and

AB Order No.: 790110

Field Engineer Kevin Buddie, Project Engineer Mark Bulmer, Project Manager Ronald Crockett, Assistant Project Manager Carson Carney, General Superintendent Ugo Del Costello, Pile Driving Project Manager Donald Jones, Field Engineer Bill Kick, Field Engineer Dragan Majkic, Office Administrator Miguel Lo, Area Superintendent Harry Noble, Design Engineer Kevin Smith, Project Engineer Scott Tudor, Superintendent Jim Waldbauer, Assistant Project Manager Lou Wehar

the upgrade and widening of the 1.25 mile Stanley Park Causeway, including new utility installation, retaining wall construction, new sidewalk/bike path construction and roadway resurfacing.

Work also included addition of three new maintenance travelers, each 9' by 62' by 4' tall. Each traveler is powered by a diesel generator and electric motors, and contains a scissor lift. There were numerous major innovations in the methodology of implementing this difficult project. AB engineers developed a lifting gantry for lowering existing 40' by 65.5' stiffening truss sections to the water and raising the new 53' by 65.5', 100 ton sections. The gantry spanned the section of old truss to be removed, riding on the sidewalk of the adjacent old bridge section and on the deck of the adjacent new section. The gantry was equipped with six strand jacks, four of which were used to lift the old and new trusses from the water or land below and two were spares. The lifts were accomplished during 10-hour, nighttime bridge closures.

Glade Creek Bridge, Beckley, West Virginia

As a subcontractor to PCL Civil, American Bridge erected a 1,904', three-span continuous Pratt truss over a deep gorge, with a simply supported plate girder approach span at each end. The interior supports for the truss are two main piers of monumental proportion. The taller of the two rises 350' above its foundation on the west slope of the gorge; each of the main pier shafts is shaped to meet the geometric requirements of the truss and to maximize efficiency throughout its height; transverse and longitudinal pier faces have curves that blend to produce an hourglass shape when viewed from an oblique angle; truss ends are supported on 20' tall



steel rocker bents and beyond each bent, the superstructure extends to a stub abutment by means of a simply supported, multi-girder steel span.

The entire bridge is founded on 3' diameter

AB Order No.: T-5134-38

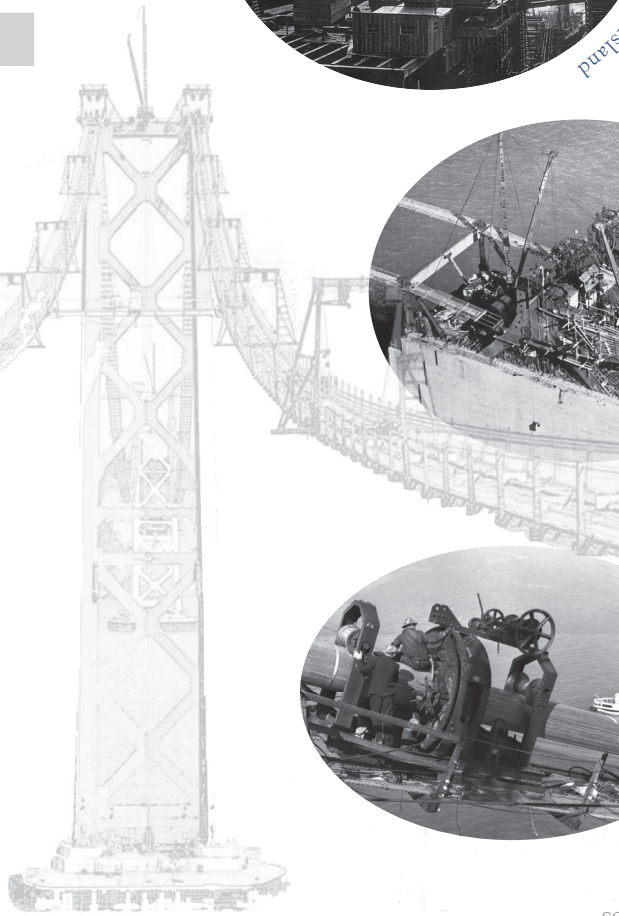
reinforced concrete caissons drilled into rock. The steel truss carries the floor system and consists of a center span of 784' and side spans of 560'. The truss provides a maximum depth of 110' at the main piers and 40' and 45' at the ends of the side spans and the center of the main span, respectively. Construction of the bridge was accomplished using a 2,879' span (tower to tower) cableway with backspans of 640' and 546'. Cableway towers were 270' high, which allowed for a vertical clearance (load cable) at center span of approximately 50' under a 50 ton load. The cableway would luff 37' right or left to accomplish steel erection across the roadway width. The load cable consisted of 2" by 3" cables carrying a trolley that was moved horizontally using a 1-1/8" wire rope inhaul/outhaul line. The load falls was rigged to handle a 50 ton load using a 7/8" wire rope loadline. The cableway was anchored into the soil using large concrete anchor tiebacks secured into the rock with 55' long rock anchors.

AB Employees: Field Engineer Calvin Boring, Field Engineer Randy Davis, Foreman Bob Langston, Project Manager Tom Owens, Iron Worker Mike Wade, Superintendent Jack White, Office Manager Ralph Whitney

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original project scope

AB was the prime contractor for all bridge superstructure in both the east and west portions of the bay. This included two suspension bridges that have a suspended length of 9,271' and four steel towers rising to a height of 515', as well as the cantilevered truss and approach spans spanning from Yerba Buena Island to Oakland. This section consists of a three-span cantilevered truss of 508'+1400'+512', five-spans of 509' trusses, 14-spans of 288' trusses, plus a four-span curved truss at Yerba Buena Island. Both bridges are double deck from start to finish, enabling the transit of 12 lanes of traffic – six on the upper deck and six on the lower.

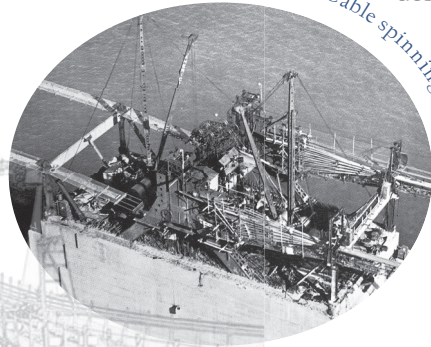


“ From June to October, 1935 American Bridge spun 10,200 tons of wire on the west suspension bridge, an average of 85 tons per day in just 120 calendar days. This and all other cable spinning records were surpassed three months later when AB completed spinning 8,800 tons for the east suspension bridge in just 69 days, setting a new world record of 128 tons of wire per day.



Cable spinning wheel at Yerba Buena Island

It was January of 1936, and all spinning was complete - time for AB to convert the shape of the cross-section from a hexagonal shape to a circle. To execute this work, American Bridge Company designed and built two special machines, which not only compacted the cables in a very efficient manner, but also applied the temporary seizing wire.



Cable spinning machine

Of the 167,100 tons of structural steel AB erected for the project, 19,100 tons were airspun main cables. The cables were airspun in 37 strands of 472 wires each, pulled in two loops. There is a total of 21,465' of main cable, and 1,192 bridge rope suspenders.



Compacting north span cables

To follow, the 1,192 suspender ropes were erected and the cables were wrapped with No. 9 soft annealed galvanized wire to protect against mechanical injury and corrosion. While [the cable] calculations were being made in New York, another squad of American Bridge Company experts was designing spinning equipment and material bought from all over the United States. ”

flashbacks

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Robert D. Fleming Bridge, Pittsburgh, Pennsylvania

The Robert D. Fleming Bridge is a 16-span bridge over the Allegheny River, named after the former Republican Pennsylvania State Senator. The crossing includes a four-span truss channel unit of 1,054' with a 400' center span, and a three-span girder unit of 494' with a 227' center span over an active railroad right of way.

American Bridge completed the fabrication and erection of this 2,100' bridge that still connects Pittsburgh with its suburb of Sharpsburg today. The road carries Pennsylvania Route 8 and is the third crossing in this location - the first was the wooden Allegheny Bridge, 1856, and the second was the narrow Sharpsburg Bridge, 1901. The latter still stands just upstream from the existing structure, its replacement, built in 1962.

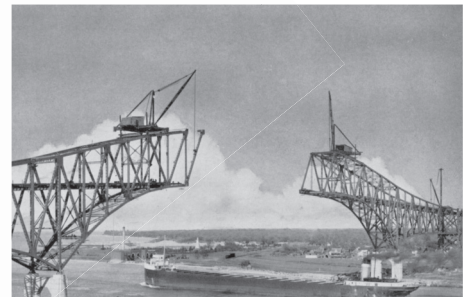


AB Order No.: V-4201-25

Blue Water Bridge, Port Huron, Michigan


Built in 1938 to handle vehicular and pedestrian traffic, American Bridge fabricated and erected this 6,178', twin-span, cantilevered truss bridge spanning the St. Clair River between Port Huron, Michigan, and Sarnia, Ontario. Connecting Interstate 94 and Highway 402, it is the second busiest crossing between the United States and Canada today.

The third lane, built onto the original bridge in 1980, was able to maintain traffic volume until 1992 when plans for an additional crossing began. Five years later the second, 6,109', three-lane, continuous tied-arch bridge was erected just south of the first bridge.



AB Order No.: G-7060

Snowden Lift Bridge, Snowden, Montana

American Bridge constructed this 1,121', vertical lift bridge over the Missouri River connecting Roosevelt and Richland counties in Snowden, Montana. The piers were sunk by pneumatic process, founded on rock 50' below the water. The bridge is comprised of three 275' trusses and a 296' long movable Parker truss which was modified in 1926 to carry vehicular traffic in addition to rail. This crossing remained shared until a vehicular replacement bridge was built in 1977. The lifting mechanism was last used in 1935 and machinery was removed in 1943, however, this bridge constructed for Great Northern Railroad (now BNSF), is still used for rail today. 



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Ken Farrelly
Bill Felker
Nate Flowers
Chairman Scott Gammon
Henry Mykich
Brian Petersen
Jody Porterfield

Best wishes from the Safety Committee to all for a safe, healthy and prosperous new year.

First, a word of thanks to site personnel at the Pier 31, the Kentucky Dam, the Walt Whitman Bridge and the Platt Street Bridge projects. Committee members visited these sites in December to solicit input from the folks on the front lines. At each site, we were very encouraged by the level of interest in our efforts and we came away with many helpful comments and suggestions that will certainly help us as we move forward in the process of improving American Bridge's safety culture. Thank you so much to all for carving time out of your very busy work days to sit with us and for sharing your thoughts and suggestions.

The committee's work updating and revising the safety program continues. Among other changes, the updated program will include sections on near miss reporting, root cause analysis, updated training requirements and revised PPE (Personal Protective Equipment) requirements.

"Our employees have responded with overwhelming support of these new initiatives ... working diligently and successfully to improve safety performance in our diverse working environments this past year."

President and CEO Michael Flowers
Stated in his interview with *AB Connections*,
starting on page 14 of this issue

safetycommittee

Updates for the New Year
by Project Manager William Felker

We are currently drafting the last sections of the program and have targeted February 13 as the date when we will publish a draft document. This draft document will be distributed to all committee members and to all the safety professionals through the company for a detailed review and critique. We plan to assemble that group for several days at the headquarters for a final review, revision and ratification of the new program. We expect this will take place in the last week of February.

Once the updated safety program is finalized, committee members, along with district safety professionals, will visit all our project sites to review with key site personnel the highlights and nuances in the new program. We expect these site visits will occur during the month of March. Once again, for the work of the safety committee to be successful we need input from all.

Should you have any suggestions or comments, please feel free to contact any member of the committee. 