New Bridge Location Determined by Studies
by: George Wallace

After nearly ten years of planning, studying multiple locations and public comment meetings, it appears the best location for the new Ohio River bridge is to be several hundred yards south of the Wellsburg City limits and across to Brilliant, OH.

Walter Ferguson of Wellsburg, chairman of the Ohio River Bridge Task Force, expressed optimism at a meeting March 10, at the Brooke County Public Library.

“I’m pleased at the progress,” Ferguson said. “Although it seems things have been going slowly, we have attended every detail and now it appears we will be down to a single site this year.”

Gregory L. Bailey, Professional Engineer and director of engineering for the West Virginia Division of Highways, said the good news is that the proposed location will show a savings of nearly $25-million over locations previously studied.

“The greatest cost is the span from entrance ramp to ramp,” he said, adding that the location from WV Route 2 across to Third Street in Brilliant near Cleaver Street will save money.

An intensive simulator study by the consulting firm, Seaman’s Church Institute of Paducah, KY, helped set the best location, Bailey said, by utilizing the simulator which determines water depth, bridge support locations and multiple river characteristics.

“This simulator answers every question,” Bailey said, “and puts us in a good position to determine location.”

The simulator is so realistic, he said, “You can almost get seasick.”

Attending the meeting with Bailey were engineers and planners from the WV Department of Highways in Charleston, and HDR Engineering of Weirton. Also on hand were representatives of Wellsburg, local colleges, committee members, and Dr. John Brown President of the Brooke Hancock Jefferson Metropolitan Planning Commission.

Numerous locations have been studied, Bailey said, including one from state route 2 at Buffalo Creek to Third Street in Brilliant near Clark Way. The span would be approximately 1,000 feet and cost about $119-million. This other proposed location is 200 feet shorter and would cost an estimated $95 million. Other locations would impact schools and a park in Brilliant and were a concern to Ohio Department of Transportation officials and residents.

When asked about the tendency for the hillside to slip onto Route 2, Bailey said the area would be widened there to eliminate that problem.

The total cost, Bailey said, would be shared between West Virginia, Ohio and an earmark of $18-million allocated by the late U.S. Senator Robert C. Byrd and U.S. Senator Jay Rockefeller (D-W.Va). The final cost, it was reported, will consist of 80 percent federal and 20 percent states. None of the promised funding has been spent, he noted, with $1.2-million having been provided through West Virginia and Ohio for preliminary studies.

Supporters of the new span have said it will bring economic development to southern Brooke and Jefferson counties and provide another route between the states during emergencies, such as the rock slides which have recently blocked sections of West Virginia Route 2 and Ohio Route 7.
SCI Conducts Bridge Feasibility Study

by Eric K. Larsson, Ph.D.

January 20, 2011

On January 5 and 6, a total of 28 representatives from the West Virginia Department of Highways, the Ohio Department of Transportation, The US Coast Guard Bridge Branch, HDR Engineering, as well as inland river industry marine superintendents, captains and pilots from 5 different companies and SCI’s professional staff gathered in Paducah, KY for a bridge feasibility study. SCI regularly conducts feasibility studies to test proposed modifications or additions that in some way impact navigation on the nation’s waterways.

The study examined a total of 4 separate bridge locations on the Ohio River between Brooke County, WV and Jefferson County, OH using a sophisticated database area developed in-house by SCI. Using advanced simulation technology, computer programmers placed bridge pier locations in various span arrangements for the 4 different bridges.

After situating various locations of the bridges and piers, captains and pilots used simulated towing vessels at SCI’s Paducah Center for Maritime Education to navigate under the simulated bridges with worst-case scenarios for wind, current, and vessel types. Experience of the captains and pilots ranged from 2 weeks to 35 years, thus recreating the experience levels of those who might pass under this yet-to-be constructed bridge in coming years.

The significant investigation conducted a total of 27 separate runs that took into account variables such as medium or high flow currents, day or night situations, fully loaded barges or empty barges, and up river or down river scenarios. After each run, captains and pilots debriefed, commenting on the ease or difficulty of the scenario and the safety margins that could be expected if a bridge was built in that position.

After two intense days of work, those involved with the testing discussed suggestions on bridge span width and locations. From this, SCI will produce a final report. Reports like this help make inland waterways safer for mariners and the general public and save millions of dollars.
SCI Conducts Assessment of New Black Oil Terminal
by Stephen Polk, Director of Center For Maritime Education

December 2, 2011

In October of 2011, Battleground Oil Specialty Terminal Company (BOSTCO) and the Port of Houston approached the Seamen’s Church Institute (SCI) about designing a navigational simulation to help visualize the construction of a new dock facility project on the Houston Ship Channel (HSC) in the Peggy’s Lake area. The proposed facility provides two deep-water ship docks, twelve barge spots, twelve rail spots, pipeline connections for crude oil and 7.8 million barrels of storage. Future development allows for two additional deep-water ship docks, eight additional barge spots and 2.5 million barrels of additional storage and pipeline connections for other petroleum products.

Neighboring tenants at the port offered differing opinions relating to navigational issues, which caused holdups in construction permits.

The Port of Houston and BOSTCO tasked SCI to conduct a study involving inland towboat captains and pilots to examine ways the new black oil terminal may affect safety and navigation within the channel.

The simulation phase of the project involved pilots from seven different organizations running the scenario with three barge configurations in a “worst case current condition” based upon mariner experience and input from the past few years.

According to Yaron Gisser of BOSTCO, the use of simulation helped give perspective on a broad range of issues and assisted stakeholders in viewing the bigger picture of this new construction project, particularly its effects on the area around it.

The Port of Houston and BOSTCO expressed appreciation for the study results, which highlighted potential issues. After completion of the exercise, SCI counseled construction advisors and builders on the potential improvements of marking the edge of the navigable dredge area and installing fenders to protect the pipeline and catwalk structures to avoid damage if a vessel gets out of position while maneuvering.
A Clairvoyant at SCI?

March 20, 2010

On Tuesday, March 16, operators of the simulator used in training mariners at the Seamen’s Church Institute’s (SCI) Center for Maritime Education in Paducah, KY gazed into the future. In an honored visit, Major General John W. Peabody, Commander, Great Lakes and Ohio River Division US Army Corps of Engineers (USACE), sat in the “driver’s seat” of SCI’s recently upgraded simulator. The Major General piloted a vessel into the Olmsted Locks at Ohio River Mile 964.4, a construction project currently not scheduled for completion for another 11 years.

How did he do it?

“Although the project is still several years away from completion,” says Captain Greg Menke, Director of SCI’s Paducah Center, “we have the completed project on our new Paducah database on the simulator.”

SCI’s recently upgraded computer technology includes detailed geographic data of important navigable portions of the United States’ inland rivers. SCI uses projected lifelike renderings of the waterways to help mariners prepare for real-life situations. Additionally, the Institute uses its simulators, able to re-create a variety of settings and circumstances, to conduct feasibility studies of construction projects before they even begin.

The Major General and those with him that day saw what others will see in the future: a speedy passage through that area of the river, which currently, according to Waterways Council, Inc., cannot meet current traffic demands without significant delays.

“SCI’s planning for the future with modern technology means that we can help the maritime community work together,” says Paducah Director Menke. “We try to be forward thinking in our approach, improving the future for the mariners we serve.”

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Accompanying Major General John Peabody on the March 16 visit to SCI’s Paducah facility: Lieutenant Colonel Anthony Mitchell, Commander Nashville District USACE; Captain Nicholas Soroka, Aide to MG Peabody; Mr. Mike Wilson, Deputy District Engineer for Project Management, Nashville District; Mike Bransford, Acting Operations Manager for Western KY, Nashville District; Don Getty, Project Manager KY Lock Project; and Ken Wheeler, Retired Towing Industry Executive