

BOFDAC news

Bureau of Facility Design & Construction, Harrisburg, PA 17101
www.dcnr.state.pa.us/facdes
Phone: 717-787-7398 Fax: 717-705-5549

FACILITY
DESIGN & 
CONSTRUCTION

Director's Notes

LHHT Bridge Promises Made – Promises Kept



Alfred Uzokwe, P.E.

When DCNR finished the demolition of the Laurel Highland Hiking Trail Bridge in March 2010, a process for replacing the bridge was immediately put in motion. After the demolition of the bridge, which had become a potential hazard to motorists along the Turnpike, snowmobile/ATV enthusiasts and other interested citizens in the area, who frequently used the bridge recreationally, wanted assurance from DCNR that the bridge was going to be replaced in short order. To shed more light on their concerns, they organized a meeting to discuss the issue and invited DCNR and their legislators– Rep. Mike Reese, and Rep. Carl Walker Metzgar, and Senator Richard Kasunic. The Bureau of Facility Design and Construction attended the meeting and presented what had been done so far with the design of the replacement structure. As DCNR project coordinator, I presented options to the group.

The meeting, which was held at the Laurel Ridge State Park complex, was attended by citizens in the area including representatives of various organizations like Jefferson Township, Living Treasures Animal Park and Log Cabin and Motel Suites, Maple Summit Snowmobile Club, Mountain Laurel Chamber of Commerce, Rolling Ridge Snowmobile Club and other representatives.

Mike Mumau, Jim Juran, and Jeff Anna also joined from DCNR. I started the meeting by presenting the bridge design that DCNR was already working on via the services of Gibson Thomas – a consulting engineering firm. I also discussed the timeline for the completion of the design, bidding, commencement and completion of the project.

One of the concerns the group had after the presentation was whether there was funding for DCNR to do what it says it would do. Jeff Anna and Mike Mumau responded that DCNR recognized the

Inside This Issue

Director's Notes	
LHHT Promises Made – Promises Kept	1
Jonathan Run Culvert Rehab – A Unique Project	2
Sinnemahoning offers new Visitors' Center	3
Works in Progress	6
Bidding Summary July – August	7
Bureau News	7
Administrative Conference at The Nature Inn at Bald Eagle	8
Employee Profile	8



LHHT Bridge – Single span structure, spanning the PA Turnpike, Somerset County

importance of the bridge structure and was doing its best to pull funding together to make the construction of the bridge a reality. In other words, a promise was made to all present, by DCNR, that the bridge was going to be replaced. At the end of the meeting, the group requested frequent updates from DCNR regarding the progress of the design work.

Continued on page –2–

Promises Made – Promises KeptContinued

As a result, throughout the design duration, FDC continued to supply progress status to Mike Mumau who, in turn, distributed it to interested parties. With that, it was clear that DCNR meant business.

I am pleased to say that a promise was made in March of 2010 and that promise has been kept. Inset in this article is the picture of a brand new Laurel Highland Hiking trail bridge taking shape. Most, who have had the opportunity to drive by that section of Turnpike, are happy to see that a new bridge has gone up and is in final stages of completion.

Of course, many people have worked hard to see to the realization of this project. Ron Carney, the FDC construction inspector on the project, is there night and day, as required, to provide inspection oversight. I recall the date I visited the project site a month and a half ago. It was raining cats and dogs, and he was out there doing his bit. Others who have also contributed in no small measure are Steve Smith, the construction project manager for FDC; John Jaskolka, P.E., the co-design project manager; Christine Fasiska, The Gibson Thomas design project manager; Mike Mumau, Park Manager; and Jeff Anna, Regional Park Manager.

Promises made by DCNR, promises kept by DCNR. Case closed.

Alfred Uzokwe, P.E.
Director



LHHT Bridge – Construction continues to progress with placement of parapet walls and deck

Jonathan Run Culvert Rehab – A Unique Project

Article by Ron Carney & Jim Kalp, LEED AP



BOFDAC staff evaluate options for the 100-year-old Jonathan Run horseshoe arch culvert

Earlier this year, BOFDAC completed construction on a unique culvert project. A culvert by simple definition is “a drain or pipe that allows water to flow under a road or railroad.” Culverts have been used throughout history as an efficient, economical way to resolve a number of span, drainage and other civil engineering problems. This project involved the rehabilitation of a 100-plus-year-old concrete, horseshoe-arch culvert. The culvert, located in Ohiopyle State Park, carries Jonathan Run under what is now the Great Allegheny Passage Rail Trail. At the time of its original construction, circa the early 1900s, the culvert carried the stream under the Western Maryland Railway. One of the things that makes this culvert unique is its elevation alignment with respect to the rail trail surface. Jonathan Run is a small mountain stream that catches mountain run-off and carries it to the Youghiogheny River by means of this culvert. The rail trail elevation is approximately 80 feet above the culvert. The rail trail acts as a large earthen dam in the mountainous valley. Without controlled flow through the 187-foot-long culvert, severe flooding and eventual erosion and failure of the rail bed and trail is certain. Jonathan Run flows can vary from a late summer flow rate of 70 gpm to a spring melt runoff of 70,000 gpm.

As with all bridges and culverts, BOFDAC staff performs periodic inspections to record the condition and safety of the structure. This data,

Continued on page -5-

Sinnemahoning Offers New Visitors' Center

Article by Lisa M. Baine, Park Manager

Earlier this year, BOFDAC completed construction of a new visitor center within the 1,910-acre Sinnemahoning State Park. Known as the Wildlife Center at Sinnemahoning, it is located in the northern portion of the park within Grove Township, Cameron County.

The 9,300-square-foot building will serve as the park's new office and public visitor center. The old park office was a 500-square-foot renovated garage that housed up to five staff members. This new facility will not only provide improved visitor services and office space but a state of the art interpretive gallery, complete with interactive exhibits that will help connect the visitor to the park and the PA WILDS region.

Sinnemahoning State Park is in the "heart" of the PA Wilds region, which is comprised of wild, natural areas from 13 counties in the northern tier of Pennsylvania. It includes 29 state parks and 1.5 million acres of state forest and state game lands. The park is surrounded by the Elk, Susquehannock and Sprout state forest districts. Sinnemahoning was chosen because of its central location and the many connections that it offers visitors to other activities and facilities within this remote region. The wildness of the area is an important draw as it provides an abundance of wildlife watching opportunities from elk to otters and an outstanding variety of birdlife. It is also a place for DCNR to share its stewardship messages with local communities, businesses and park visitors.

As with many of DCNR's new facilities, integrated and sustainable design strategies were



*The new Wildlife Center at Sinnemahoning
Sinnemahoning State Park*



*Wildlife Center at Sinnemahoning
Interior view of Lobby*

incorporated throughout the project. The building is seeking a USGBC LEED Silver certification. Sustainable design and construction features include such strategies as the extensive use of FSC-certified wood products; use of regional materials (harvested & manufactured within a 500-mile radius); materials manufactured with recycled content and use of products with no volatile organic compounds (VOC). Energy conservation is achieved by using structural insulated panels to create a thermally efficient building envelope that is conditioned by a high performance geothermal heating and cooling system. The building's HVAC and lighting systems are run by an automated control system that provides maximum efficiency, resulting in energy and operational cost savings. Water conservation is achieved by low-flow fixtures, including low-flow dual flush toilets and waterless urinals.

To mitigate any heat island effect on the surrounding area, the roofing material has been constructed of light and reflective materials that reflect radiant energy back into the atmosphere rather than trap or store it as heat. This reduces the interior temperature of the building during the summer months and, consequently, keeps cooling costs to a minimum.

To allow for maximum infiltration of storm water into the soil, care was taken to keep paved areas on the site to a minimum, and strategically positioned rain gardens were constructed around the site to further deal with the issue of onsite surface water runoff.

Continued on page -4-

Sinnemahoning Visitors Center

.....Continued

In addition, the building site is designed to comply with “dark skies preserve” standards. There is no artificial lighting installed in the surrounding environment. This helps to maintain the PA Wilds’ famous dark skies that star-gazers from all over the eastern U.S. enjoy.

The Bureau of State Parks is working closely with a consultant to design a variety of interactive exhibits that allow park visitors to create their own unique outdoor experience within the park and the PA Wilds region. Permanent displays will convey the iConserve message, wildlife watching opportunities, green camping ideas, local history, wildlife photography, conservation “heroes” who have worked hard to protect our natural resources and creative ways for the visitor to create her or his own itinerary in this remote section of Pennsylvania.

The Wildlife Center at Sinnemahoning will serve as an informative and educational experience to visitors of all ages in one of Pennsylvania’s truly “wild” regions. In addition to the new Visitor Center, the park boasts newly renovated rail trails; five renovated bridges; a 35-site campground and a 145-acre lake that is perfect for eagle watching and kayaking. The park is also home to the George B. Stevenson Dam flood control project, which is an integral part of the Army Corps of Engineers’ water management system for the West Branch of the Susquehanna River.

An official Grand Opening of the Center is planned for October 26, 2011.

Project Capsule

Project Number: DGS 104-5
Project Coordinator: Alfred Uzokwe, P.E.
Designer: LSC Design Inc.
Inspector: DGS
Fund: Key 93 / Capital
Cost: \$3,800,000.00

Construction

General: Lobar, Inc.
HVAC: Overdorf Mechanicals, Inc.
Plumbing: Eshenaurs Fuels, Inc.
Electrical: Lepley Electrical



*Wildlife Center at Sinnemahoning
Interior view of the gallery exhibit space*



*Wildlife Center at Sinnemahoning
Interior view of the classroom space*



*Wildlife Center at Sinnemahoning
View from Lobby to parking area*

We're on the Web!

Visit us at:

www.dcnr.state.pa.us/facdes

Jonathan Run Culvert RehabContinued

along with the particular purpose and use of the structure, helps BOFDAC staff plan and prioritize the necessary rehabilitation and replacement of its structures across the state.

Although this structure was still structurally intact considering its age, it was exhibiting some scouring and undermining under portions of its foundation as well as the underlying sandstone bedrock. Because of the impact a failure of this structure could have, the project was prioritized for repair or replacement.

The design team considered various options. A complete replacement would allow for a structurally superior culvert capable of higher capacity flows. However this would require clearing a large area of trees, creating an undesirable, visible impact to the landscape; excavation and placement of thousands of cubic yards of earthen fill; and closure of the Great Allegheny Passage rail trail for an extended period of time. The steep mountainous hillsides on the upstream and downstream sides of the culvert created challenges even for DCNR personnel to inspect the culvert, let alone a contractor gaining access to the culvert site for the rehabilitation project. A rehabilitation of the existing structure would permit the rail trail to remain fully operational, but offered design challenges in modifying the 100-year-old concrete arch culvert structure.

Located in the scenic Laurel Highlands of Fayette County in the southwestern part of the state, Ohiopyle State Park is one of the most highly visited parks in the commonwealth. It is known for its variety of popular outdoor activities, which include camping, white water rafting, hiking and biking.



Initial alignment, assembly and installation of the galvanized steel liner system

Because so much of the park's visitation is attributed to the popularity and use of the rail trail, a rehab of the existing culvert was the most appropriate choice.

The design/construction work required planning and constructing a new roadway access to the culvert and a temporary diversion of Jonathan Run. Repairs to the 187-foot-long culvert included the placement of mass concrete to reinforce and stabilize the foundation to the bedrock; construction of a reinforced concrete floor slab and stem walls within the existing horseshoe culvert, installation of a heavy gauge, arched, galvanized steel liner; pumping of high-strength grout into the annular spaces and voids; and headwall repairs and modifications.

Construction of the project started in March 2010. The project was delayed numerous times due to the fluctuating flow of Jonathan Run and harsh winter weather conditions, which created difficult working conditions as well as difficult access to the site.

Completion of this project will allow increasing numbers of hikers and bikers full access along the 141 miles of the Great Allegheny Passage Rail Trail from Cumberland, Md. to Homestead, Pa., giving them access to some of the most beautiful natural areas and historical towns in the state.



Completed rehabilitation of the horseshoe arch culvert – Jonathan Run under the Great Allegheny Passage Rail Trail

Project Capsule

Project Number: FDC-211-1046
Project Coordinator: Steve Smith
Designer(s): Ed Raptosh, P.E.
Inspector(s): Ronald Carney
Fund: Keystone
Cost: \$777,875.92

Construction

General: W.G. Land Company, LLC

Works in Progress



*FDC-414-961 - Promised Land State Park
Pickrel Point & Deerfield Campground Rehabilitation
Installation of stone veneer - Pickrel Point Wash House*



*FDC-414-961 - Promised Land State Park
Pickrel Point & Deerfield Campground Rehabilitation
Inspection of the framing and rough-in work*



*FDC-006-6476 - Gallitzin State Forest
Structure Replacement Bridge No. 06-0004
Placement of reinforced, precast concrete box culvert sections*



*FDC-020-7182 - Loyalsock State Forest
Structure Replacement Bridge No. 20-9011
Demolition of existing CM pipe structure & excavation for new box culvert construction*



*FDC-219-2239 - Laurel Ridge State Park
Laurel Highlands Hiking Trail Bridge
A crane setting the single span, steel superstructure
across the turnpike*



*FDC-219-2239 - Laurel Ridge State Park
Laurel Highlands Hiking Trail Bridge
Placing and screeding the concrete deck*

Bidding Summary July '11

FDC-202-7133.1 – Cook Forest State Park General Construction: Sewage Line Repairs			
Bid Price:	\$20,533.75	Apparent Low Bidder:	State Pipe Services, Inc.
FDC-318-6012.1 – Canoe Creek State Park Inlet Box & Drainage Pipe Rehabilitation			
Bid Price:	\$111,000.00	Apparent Low Bidder:	Clearwater Construction
FDC-211-6945.1 – Ohiopyle State Park Sugarloaf Sledding Area Restroom			
Bid Price:	\$68,060.00	Apparent Low Bidder:	BCS Construction
FDC-222-6206.1 – Erie Bluffs State Park Rehabilitate Elk Creek Restroom			
Bid Price:	\$75,091.00	Apparent Low Bidder:	XL Excavating, Inc.
FDC-015-7189.1 – Susquehannock State Forest Fuel Tank Removal and Replacement			
Bid Price:	\$59,400.00	Apparent Low Bidder:	YCP Incorporated
FDC-303-6943.1 – Caledonia State Park Rehabilitate Sewage Lift Station			
Bid Price:	\$120,600.00	Apparent Low Bidder:	PSI Pumping Solutions, Inc.

Bureau News

New hires include Ray Zomok for Chief, Division of Design; Brad Skiles for Clerk Typist 2, Administrative Services Section; Alex Barket for temporary administrative support in the Central Office.

Bidding Summary July '11 Continued

FDC-014-6550.1 – Cornplanter State Forest Vault Toilet Restroom			
Bid Price:	\$49,771.00	Apparent Low Bidder:	Frank's Electrical Construction
FDC-012-6013.1 – Tiadaghton State Forest Haneyville ATV Trail			
Bid Price:	\$64,351.00	Apparent Low Bidder:	Frank's Electrical Construction, Inc.
FDC-450-4345.1 – Delaware Canal State Park Structure Replacement Ferry Street Bridge over Delaware Canal			
Bid Price:	\$1,492,000.00	Apparent Low Bidder:	Loftus Construction

Bidding Summary August '11

FDC-225-4615.1 – Point State Park Fountain Rehab: General Construction			
Bid Price:	\$6,497,000.00	Apparent Low Bidder:	SET Inc.
FDC-225-4615.2 – Point State Park Fountain Rehab: Mechanical			
Bid Price:	\$1,550,000.00	Apparent Low Bidder:	Wayne Crouse, Inc.
FDC-225-4615.3 – Point State Park Fountain Rehab: Plumbing			
Bid Price:	\$104,700.00	Apparent Low Bidder:	AMB Corp.
FDC-225-4615.4 – Point State Park Fountain Rehab: Electrical			
Bid Price:	\$1,429,000.00	Apparent Low Bidder:	Right Electric, Inc.

Bidding Summary:

July Total Bids: 9
July Total Bid Value: \$2,060,806.75

August Total Bids: 4
August Total Bid Value: \$9,580,700

Administrative Conference at The Nature Inn at Bald Eagle

Article by Rhonda Dolen

The Administrative Clerical Conference this year was held September 20 –22 and was at the Nature Inn at Bald Eagle State Park for the second year in a row. Employees also toured the Elk Country Visitor Center, a project for which conference attendees supported the administrative and contract side of the design and construction process. The tour included an informative learning session with Elk Country Visitor Center staff regarding the construction and operations funding process and information about the site as a tourist attraction. There was a further discussion on design of the site with one of BOFDAC's designers, landscape architect and section chief, Andy Evans.

Employees also met to discuss administrative business, including various aspects of the construction contract process. Also discussed were communication improvement and efficiency. Various ways to enhance administrative work processes were considered. The project database was discussed as well as aspects of reporting. Improvement and enhancement of many aspects of administrative support for bidding projects and for design were considered. Attendees also held a potluck barbeque dinner at the Nature Inn and enjoyed the use of the Nature Inn's fire pit in the evening.

Birthdays:

☺ Alfred Uzokwe	October 1
☺ Jim Kalp	October 3
☺ Ed Raptosh	October 7
☺ Jason Adams	October 11
☺ Dan Pierce	October 14
☺ Rhonda Dolen	October 28
☺ Bob Shaver	November 5
☺ Donna Mumma	November 7
☺ John Jaskolka	November 10

Questions – Comments?

We value our reader's feedback. Send your questions or comments to:

Chief Editor: Jim Kalp, jakalp@state.pa.us

Assistant Editor: Rhonda Dolen, rdolen@state.pa.us



Employee Profile: Andy Evans

Andy Evans is a registered landscape architect and the chief of the landscape design section in the Bureau's central office in Harrisburg. He started with DCNR in 2002, working for the Bureau of State Parks in the Park Planning Section before moving to BOFDAC in 2006. Prior to his employment with DCNR, Andy worked at Sasaki Associates outside of Boston, Ma. and Derck and Edson Associates in Lititz, Pa. Some of the notable projects that he had the opportunity to work on were the Oklahoma City National Memorial, Kennedy Center for the Performing Arts, and the Hershey Children's Garden.

As a section chief, some of Andy's responsibilities include overseeing the activities and programs of the landscape design section, developing site and landscape plans for various state park and forest projects, and providing assistance to other agencies on accessibility, site design, and planning issues.

Andy graduated from Northern Lehigh High School in Slatington, Pa. and attended Penn State University where he earned a bachelor of landscape architecture degree with a geography minor in 1998.

Andy and his wife Jodie reside in Elizabethtown with their three children, Owen, Adam and Allison. He likes to spend his 'free time' coaching little league baseball, scrambling to kids' soccer and basketball games and attending piano and violin recitals. He also enjoys spending time outside working in the yard, photography, vacations at the beach and visiting Disney World.

Bureau Mission:

To provide multi-disciplined technical support to the other bureaus in DCNR in the areas of project design, project inspections, construction management, contract administration, surveying and other technical advice and consultation.