Office of Facilities, Environmental and Cultural Resources

APRIL 2009 Indian Affairs

The American Recovery and Reinvestment Act of 2009

Indian Affairs To Address Schools, Detention Center Improvements

Indian Affairs will use American Recovery and Reinvestment Act funding to improve its schools, detention centers and federal administrative facilities across Indian Country. The improvements will be based upon the prioritized needs in OFMC's construction programs and in each of its nine regions. There will be detailed tracking of how the funding is used.

"Because of our ongoing capital project planning process and our extensive use of the FMIS backlog to prioritize our facility maintenance needs, Indian Affairs is ready to address the timely use of the funds, for the benefit of the national economy and for the

Turtle Mountain High School: First LEED Silver Certification Replacement School for OFMC

The OFMC-funded Turtle Mountain High School replacement school project in Belcourt, N.D., has achieved a milestone in Indian Affairs: the first Leadership in Energy and Environmental Design (LEED) Silver Certification by the U.S. Green Building Council (USGBC).

The 126,000 square foot day school, which opened in 2008, was constructed for 572 students who are mostly members of the Turtle Mountain Chippewa Tribe. The school is operated by the Bureau of Indian Education. During its design and construction, the project successfully earned 33 project points/credits, as determined by the USGBC, toward a LEED Silver Certificate. For example, the school was designed to optimize energy performance and daylight views, enhance alternative benefit of Indian Country," said OFECR Director Jack Rever. "We will be tracking how the money is spent through special administrative supervision and through contract language requiring reporting under the Act."

The funds will be used for Education Construction to completely replace some schools while completing other existing replacement projects. The Facility Improvement & Repair (FI&R) program will fund more than a dozen major school improvement projects, while the Minor Improvement & Repair (MI&R) program could address numerous safety, roofing, HVAC, and energy saving projects. Addressing Indian Affairs' top deferred maintenance needs, as prioritized in the FMIS backlog, will likely spur the employment of skilled and unskilled laborers. Also, several Office of Justice Services detention centers will be upgraded.

"We serve Indian people across the United States so we want to use the funding wisely in each of OFMC's regions," Rever said.

For more on the American Recovery and Reinvestment Act, see Page 3.



Turtle Mountain High School is Indian Affairs' first LEED Silver Certified school

transportation, capture storm water runoff, reduce rooftop heat islands, and reduce ozone by eliminating HCFCs in heating, ventilation and air conditioning (HVAC) components.

The OFMC Project Manager was Keith Miller, a member of the Rosebud Sioux Tribe. Architecture services were provided by KKE Architects of Minneapolis, Minn. Ericksen Roed & Associates of St. Paul, Minn., was the structural engineer. The contractor was Comstock Construction, Inc. of Bismarck, N.D., and EcoDEEP Architecture of St. Paul, Minn., provided sustainable design planning.

Turtle Mountain High School is the first OFMC-funded replacement school project to achieve LEED Silver Certification, an advanced certification. Two other OFMC-funded replacement schools, First Mesa Elementary School on the Hopi Reservation in Arizona and Baca / Dlo'ay Azhi Community School on the Navajo Reservation in New Mexico, received LEED Certification.

Briefs

Nazlini School Fire Station Finishes Net Zero Design

The design for the Department of the Interior's first net zero energy building has been completed. The OFMC Structural Fire Protection Program's fire station at Nazlini Community School in Arizona will have an HVAC system which includes a high efficiency split direct expansion evaporative cooler and outdoor condenser using Puron refrigerant R-410A (energy efficiency ratio: 13.5). A separate gas-fired furnace with 96.6 percent air-to-fuel efficiency will have a concentric vent kit for sealed combustion. The roof-mounted photovoltaic system will generate 7.5 kW using a Grid-Tie system with electric utility Net Metering, without a battery backup. Indoor lighting will use T5 lamps and electronic technology ballasts.



Pine Ridge High School, S.D., Mural Replacement Finished

Contemporary Lakota artist Del Iron Cloud has completed his OFMC-funded recreation (above) of a 1930's mural depicting the history of the Oglala Sioux Tribe by Lakota artist Andrew Standing Soldier. The original was demolished along with Pine Ridge High School's auditorium in 2003.



The new mural encircles part of the Pine Ridge gym.

Canadian Parliament Contacts Indian Affairs

The Parliamentary Budget Office (PBO), which is an independent office of the Parliament of Canada, contacted Indian Affairs in November for advice on capital funding for constructing schools for Canada's indigenous people, whose tribes are called First Nations.

"While we are looking at infrastructure funding for First Nations schools, we were contacting you to find out about ...practices in the United States in order to have comparable data from jurisdictions outside Canada which have a similar history regarding the establishment of reservations for First Nations," wrote Jamil Chamoun, Financial Analyst / Revenue & Expenditure Analyst for the Office of the Parliamentary Budget Officer. Similar to the U.S. Congressional Budget Office, the PBO serve as financial advisors to Parliament, analyzing real or potential costs of government programs and initiatives and provide objective and non-partisan advice on these matters to Parliamentarians and Canadians.

The PBO inquiry has resulted in a December 2008 invitation from Margie Morin, OFMC's Chief, Division of Planning & Programming, for PBO officials to visit OFMC "to go through our process on how we construct schools."



Cherokee, N.C., Replacement Campus Awaits Dedication

The 473,000 square foot Cherokee Elementary and High School replacement campus on 40 acres in North Carolina will include an environmental, cultural and educational "village" where Cherokee language and culture will be taught to the 800 K-12 students, alongside standard curriculum. The school's site was obtained in 2003 by the Eastern Band of Cherokee Indians in a land swap with the National



Park Service which, in turn, allowed the Park Service to expand the Great Smoky Mountains National Park's Blue Ridge Parkway. The OFMC Project Manager is Andy Acoya, a member of Laguna Pueblo.

The American Recovery and Reinvestment Act of 2009 OFMC Plays Key Role in Indian Affairs Projects

Indian Affairs' March proposal to Interior Secretary Ken Salazar on how to best utilize American Recovery and Reinvestment Act (ARRA) funds benefitted from OFMC's existing focus on project planning and prioritizing of construction and maintenance needs.

For example, in considering proposed replacement school projects, OFMC has long maintained a priority list which has been formally published in the Federal Register. So when the Indian Affairs ARRA proposal included possible replacement school projects, the list provided the current top priority replacement school projects to be constructed. Also, some replacement schools which were recently constructed need limited construction funding to complete the projects, and those were included in the Indian Affairs proposal.



OFMC Division of Planning & Programming Chief Margie Morin addresses contractors, architects and engineers in March regarding opportunities under the ARRA funding.

OFMC's submission of comparable costs for constructing new schools elsewhere in America, both in urban and rural areas, was critical to Indian Affairs proposal to use some of the ARRA funds for replacement school construction. Those comparisons showed Indian Affairs replacement school cost projections are in line with other school construction programs.

The Facility Improvement and

Repair (FI&R) major construction projects proposed to be addressed with ARRA funds involved BIE-funded school locations throughout 26 states in the nine OFMC regions. Of the 184 BIE-funded schools, 70 are currently in poor condition. The Indian Affairs proposal would improve conditions at some of these schools which educate a total of 15,300 students. Similarly, the proposal also addressed the need for improving conditions in some of the Office of Justice Services' 34 detention centers in Indian Country.

Minor Improvement & Repair (MI&R) projects—some up to \$1 million—were also addressed in the Indian Affairs proposal. Some roof repair projects include solar panel installation to generate power for the facility, along with numerous energy saving projects involving HVAC, windows and lighting. Employee housing improvement projects will also save energy.

On-the-job workforce training is part of the proposal through deferred maintenance projects stemming from the FMIS backlog, a prioritized database of maintenance needs for Indian Affairs facilities. Both skilled and unskilled labor will be needed to address many facility maintenance needs such as painting, plumbing, and energy saving improvements at Indian Affairs facilities.

Accountability

OFMC to Ensure ARRA Funds Are Tracked, Used as Intended

OFMC will provide specialized tracking of its use of American Recovery and Reinvestment Act funds for Indian Affairs facility construction and improvement projects. The Act allows Indian Affairs to use part of the funds for administrative purposes related to tracking the projects.

"OFMC will keep track of the funding through our administrative structure," said OFMC Deputy Director Emerson Eskeets. "Separate reports will be made on the use of the American Recovery and Reinvestment Act funds, aside from our normal reporting mechanism."

The contracts that OFMC will use to address deferred maintenance projects, stemming from the FMIS backlog, will specify that the contractor make detailed reports on how the funding is being used and if skilled or unskilled laborers are being employed.

"OFMC's Operations & Maintenance Division is moving swiftly to use the funds to reduce its maintenance backlog throughout Indian Country," said Eskeets. "Accountability must reach all the way to the project level, where regional facility managers, Agency and school facility staff, and possibly tribal supervisors, understand that they have to report on all aspects of work, even their daily work tickets."

Compliance

Environmental, DSRM Plan Reviews to Move Quickly

The Division of Safety and Risk Management will conduct timely, standard architectural plan reviews for the major Indian Affairs construction and renovation projects funded by the American Recovery and Reinvestment Act, possibly with the help of contract inspectors. Similarly, environmental and archeological compliance reviews will be performed as usual, but with contract assistance to speed up the process.

When Good Roofs Go Bad

FI&R Planning Considers Entire Building Envelope, Especially Roofs

Today, roofs are a key aspect in the OFMC planning process for upcoming FI&R projects, which consider a building's entire envelope in determining the extent of renovation to an existing structure. Central to this process is the inherent prioritizing in the FMIS backlog inventory of proposed projects for Indian Affairs facilities. After emergency and life safety considerations, the FMIS backlog's priority is to address structural deficiencies such as roofs.

But the need for roof repairs frequently is unexpected and can develop even when an annual roof inspection program is in place. For years, roof inspection and preventive maintenance has been a trouble spot for Indian Affairs. In FY2007, emergency funding was used for \$580,000 in roof repairs for Indian Affairs facilities, representing about 25 percent of all spending for emergencies that year. That means that many roof problems got to the point of needing emergency action instead of having been a scheduled project.

Meanwhile, approximately 60 percent of the 3,251 occupied Indian Affairs buildings (non-quarters) are 30 year old or older, which means that whatever warranties there might have been for their original roofs have expired.

While many unexpected projects (under \$100,000) are funded through OFMC's emergency repair funds, larger unexpected roof patching needs can become their own MI&R project (up to \$250,000)— or even an FI&R project for a new roof.

"Predicting the life-cycle of a roof is an inexact science, and it's clear that OFMC is still working at staying abreast of the roofing needs of every Indian Affairs facility," said OFMC Deputy Director Emerson Eskeets. "But we don't want multimillion dollar roof emergencies, and proper planning is the first step in minimizing that possibility."

Written directions lend little assistance

46 BIAM guidance calls for "roof patching." Section 3.4A (3) allows for MI&R projects "required to repair, restore or modify plant facilities and equipment to their original condition." It specifies "roof patching" in this category—and requires project justification.

FMIS addresses preventive maintenance, such as roof inspections, and provides this basic instruction in its standard roof inspection task description: *Bring materials in a pick-up. Use a ladder to gain access to the roof. Talk with building occupants to determine if the roof has been leaking.*

Which is tougher on a roof? A. Northern Tier winter

We have a wide range of conditions, from extreme cold to extreme heat. That's a lot of contraction and expansion. I prefer a single-ply PVC membrane for our roofs, heat welded. That reduces the chance for errors.

- Phil Livermont, Great Plains Region engineering technician (roofing)

B. Southwest summer It's so hot and dry that the sun cooks the roofs, makes them get old and deteriorated quickly. Then they crack and let water in. I like the PVC membrane, welded together with a heat gun. (PVC roofing systems also reflect nearly 90% of the heat of the sun).

- Erwin Kaisem, Western Region facility manager.

Then, more on-task, FMIS advises: Check out roof for soft spots, punctures in metal, cracks in wall copings, etc....Inspect roof decking beneath roof where possible for discoloration from weather leaks.

Another area affecting roof inspection and maintenance for Indian Affairs facilities has been sporadic facility staff training, especially related to the development of new technologies in roofing. Even when OFMC received funding for its own regular training program, roofing was not a priority session.

Asset Management Plans could help.

Annual Site Specific Asset Business Plans (SSABP) will benefit Indian Affairs facility managers in estimating how much funding should be requested for roof repairs. The annual plans are used to determine funding and program asset priorities for locations. Each SSABP reflects asset planning "from the bottom up" by the line official in the field who supervises the management of local Indian Affairs assets. The purpose of asset management planning is to ensure Indian Affairs facilities inventory matches the mission of Indian Affairs programs, while making sure mission-critical facilities are systematically maintained.

"Facility managers are frequently faced with emergencies that take up their time, which could be spent planning to prevent those very emergencies. This is especially true for roofs. Inspecting and maintaining roofs is critical to anticipating their scheduled replacement," said Eskeets. "By requiring that facility managers submit annual SSABPs, OFMC should be successful in reducing the number of occasions that emergency funds are needed for roofing projects."



What about the warranty? How is the 2004 roof replacement at the Warm Springs Detention Center holding up?

> The 14,500 sq. ft. roof replacement project for Building No. 1030, the Warm Springs Detention Center, involved the replacement of the EPDM membrane roof with a sealed seam steel roofing material. The 2004 project cost about \$175,500.

> The work began with the removal of the concrete-styrofoam composite pavers and broom cleaning of the membrane. The membrane did not have to be removed.

The new roof was "R-mer Lite" a product of the Garland Company, which is rolled sheet steel with a butyl gasket sealing the joints. It is mechanically fastened to the roof deck.

The product has a 30-year warranty, and a 50-year life expectancy. Warm Springs Agency Facility Manager Don Robertson said the roof has been satisfactory for the past five years.

A Garland Company representative said the warranty for its "R-mer Lite" roof is only one part of what makes a roof successful.

"A warranty is a piece of paper. You first need to have a good design, quality materials, a quality contractor, inspections during the construction and a good preventive maintenance program afterward," said Eric Younkin, warranty manager for the Garland Company.

"Our warranty is for the number of years specified and includes annual inspections (walking the perimeter of the roof) and educating the maintenance staff on proper care for the roof. Also, the roofing contractor should give a two-year craftsmanship guarantee."

Like other facility management organizations, OFMC depends on product warranties, as well as warranties for work by roofing contractors, to ensure Indian Affairs buildings have dependable roofs.



Focus

Symposium Suggested Improvements Are Attracting More OFMC Bidders

Since OFMC's two-day symposium in April 2008, "Understanding the Factors Impacting the Department of the Interior Construction Costs," some of the participants' recommendations have produced impressive results.

For example, a majority of school construction projects previously used the traditional design/bid/build method, with the contract awarded to the lowest bidder. Symposium participants suggested using a Competitive Negotiated Proposal or "Best Value" contract to allow contractor selection using criteria such as quality of work and past performance. Contractors could be pre-qualified and if approved, invited to bid with price negotiation afterwards. Under Best Value contracts, owners can discuss the project with a contractor to clarify items and negotiate work.

Since the FY2008 fourth quarter, OFMC has followed this recommendation and has advertised all projects for bid as Best Value contracts. The results have been favorable. While past contracts attracted only two or three bidders, Best Value contracts have attracted seven or more bids from wellqualified contractors. Several of the contractor's bids were below the government estimate, resulting in a savings of millions of dollars. This change also fulfilled another recommendation: to increase the contractor pool.

In another action, OFMC is publishing precontinued on Page 7



Porcupine Day School on the Pine Ridge Reservation in South Dakota formally opened in February.

Pahin Sinte Owayawa Smooth Communication Facilitates Porcupine Project

Communication was a priority among the principals involved in constructing the replacement Porcupine Elementary School in South Dakota. "Bill Koenen called OFMC nearly everyday," said Porcupine School Board President Paul Iron Cloud. Even though the school's construction was through a Pub. L. 100-297 grant and only a monthly narrative was required, Koenen, the project liaison, said he placed a high value on keeping all parties informed. "We all shared the



Porcupine School Board President Paul Iron Cloud (left), Project Manager Glen Barber, OFMC Deputy Director Emerson Eskeets and Project Liaison William Koenen agree that frequent communication was vital to the project's success.

same goal from Day 1. Open communication builds trust among all parties—not that there weren't bumps along the way. But if there's no communication, that's where the breakdowns come, the misunderstandings and the rumors," said Koenen. Project Manager Glen Barber similarly favored communication with OFMC staff. "One has to understand that they have federal regulations they must follow, but they do want to help," said Barber. The OFMC Project Manager was Bob Montoya, a member of Sandia Pueblo.

Employee Quarters

Converting Housing Units to Other Uses Indicates Future Lack of Need, Causing O&M Funding to Cease

Converting employee housing units to other uses may be an advantageous use of an available structure. However, implicit in the conversion is the decision that the unit is no longer needed to house employees—and that decision will hold true on into the future. "We respect the local official's decision to cease using the housing unit as an employee quarters," said Indian Affairs Employee Housing Manager Gerald Curley. "But that takes the unit off of our Employee Housing Inventory in perpetuity, and the upkeep of that structure is no longer a subject of the Quarters Management Information Systems's backlog."

Riverside Cafeteria Points to Dinner

The new kitchen and dining facility (upper right) at Riverside Indian School in Anadarko, Okla., was completed this allowing spring, over 500 students in



June Training **Firefighters**

Manager is Phil Asmus.

This June, Navajo Region firefighters will train in Socorro, N.M. Northern tier firefighters can choose Set for Structural June training in Lower Brule, S.D., or in Standing Rock, N.D. For information, contact Structural Fire Protection Program Manager Ed Abeita at (505) 563-5109.

Circle of Life Survival School Nearing Construction Along the Shores of Mission Lake in Minnesota

The Circle of Life Survival School replacement campus near White Earth, Minn., is nearing construction. The 56,000 square foot school for 96 students in grades K-12 is situated on the northern bank of Mission Lake. The 8.4 acre site of the former St. Benedict's Mission School is where evidence of a prehistoric hunting camp was uncovered. The school was authorized by OFMC for 44,000 square feet, but the White Earth

Band of Minnesota Chippewas contributed to the project to add square footage. The OFMC Project Manager is Andy

Robinson, а member of the Northern Cheyenne Tribe.





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solicitation notices, giving contractors notice of an upcoming bid opportunity. This gives contractors time to visit a site and to line up potential subcontractors. This may also lead to reduced costs.

OFMC is also improving documentation, another recommendation. Both the School Facilities Design Handbook and Space Templates are reviewed and updated on an annual basis, with the next update scheduled for a FY2009 first guarter release. Changes to industry standards, code revisions and lessons learned are incorporated into these revisions.

To reduce turnaround time, the Division of Safety and Risk Management is now involved in interim drawing reviews. On appropriate projects, these reviews take place when 40% and 70% of the drawings are complete, rather than just a final review at 99% or 100% complete. This has already shown a positive impact by reducing the number of change orders.

Indian Affairs established new policies and procedures to improve payment turnaround time shortly before the symposium. One contractor at the symposium said he had already seen a striking improvement. He stated payments were more prompt. Indian Affairs records indicate that the new procedures are resulting in more timely payments, with late payment fees and penalties being reduced.

Another symposium suggestion was to create temporary housing alternatives for remote locations-allowing contractors to develop trailer pads on a construction site to reduce project costs. One project is now utilizing this suggestion.

New school site on Mission Lake

OFECI

and the Division of Environmental and Cultural Resources Management. Facilities Management and Construction, the Division of Safety and Risk Management, The Office of Facilities, Environmental and Cultural Resources oversees the Office of

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PUBLIC NOTICE

Eskeets has worked for OFMC for the past 15 years, and was primarily involved with school construction. For the past five years, Eskeets served as the Chief of OFMC's Division of Design and Construction. He previously had

have oversight of the construction of Indian Affairs-funded schools, administration buildings and detention centers, as well as for the safe operation and maintenance of all Indian Affairs-funded facilities. He will supervise 50 staff members in the Albuquerque central office as well as all OFMC staff, architects and engineers in OFMC's nine regional offices across Indian Country.

Supervisory General Engineer Emerson Eskeets, a native of Springstead, N.M., on the Navajo Reservation, has been named Deputy Director of the Indian Affairs' Office of Facilities Management and Construction (OFMC) in Albuquerque, N.M. In succeeding Boyd Robinson, who retired in January, Eskeets will

Emerson Eskeets Named OFMC Deputy Director

served as Deputy Chief, Division of Operations and Maintenance. Eskeets' work has familiarized him with preparing multimillion dollar construction budgets,

Eskeets received his B.S. in Mechanical Engineering from the University of New Mexico. He is a graduate of Gallup High School in New Mexico and is a U.S. Air Force veteran.

"The selection of Emerson Eskeets as Deputy Director of

OFMC ensures that a talented and experienced executive

will oversee new construction and facility management for Indian Affairs at a very crucial time in our nation's economic history," said OFECR Director Jack Rever. "His selection also

demonstrates that Indian Affairs is successful in developing

qualified managers from within its organization, which is

paramount in providing sound continuity of operations."

overseeing massive construction projects, analyzing activitybased costing for construction projects and developing and refining an Indian Affairs facilities database. Eskeets also has worked for the U.S. Army Corps of Engineers and has a total





Eskeets