

Mountain Top Remediation

FMIS Backlog Addresses Safety, Facility Deficiencies at Communication Tower Sites



A renovated transmission tower site sits atop a mountain on the Acoma Pueblo Reservation in New Mexico.

OFMC has begun the remediation of all safety and physical plant deficiencies at BIA-owned communication tower locations, many of which are on remote mountain tops and hills across Indian Country. The improvement effort stems from a site condition assessment survey conducted by MindBank Technical Solutions for the BIA in 2006.

The remediation work will proceed region by region, with certain regions identified as having urgent and high ranked deficiencies.

The goal of the effort is to eliminate serious life/safety deficiencies at the communication tower locations and provide functional facilities and a safe working environment for maintenance personnel. As some tower sites serve a number of programs, the Office of Justice Services communications network will benefit from the remediation work.



Tower renovation work gets underway in New Mexico.

The results of the survey produced a report which identified specific tower infrastructure deficiencies, including the scope and estimated cost of correction. The deficiencies currently reside as deferred maintenance backlogs in FMIS and comprise a nationwide need.

OFMC-Sponsored Training Program Set for June 2-6, 2008 at NIPTC in Albuquerque

OFMC will be holding a week-long, multi-track training conference for Indian Country facilities personnel in June 2008 at the National Indian Programs Training Center (NIPTC) in Albuquerque. Currently, the program will include instruction provided by program managers from OFMC and the division of Safety and Risk Management. For information about the training conference, contact OFMC Training Coordinator Sandy Lujan at (505) 563-5180.



Boiler Recertification Instructor Eddy Emerson displays a boiler valve during the October 40-hour recertification class at the National Indians Program Training Center.

This year, OFMC is offering boiler recertification training. It is also working with the Office of Justice Services and agency facility managers to provide training in the use of standard locking devices, security systems and control panels for detention centers. OFMC is also offering energy management training to assist schools, detention centers

and administrative facilities in complying with the Energy Policy Act of 2005, which calls for Bureauwide energy savings of two percent a year through 2015.

Briefs



SIPI's roof meets Cool Roof Rating Standards.

SIPI Gymnasium Roof Is Now a Solar Collector for Campus

The 24,000 square foot, flat roof atop the gymnasium at the Southwestern Indian Polytechnic Institute (SIPI) in Albuquerque is now the largest solar collector of its type in New Mexico. In November, the gym roof was covered by a membrane containing lightweight, thin-film, photovoltaic cells. The low-slope, flexible thinfilm that was adhered to the gym roof is expected to generate a peak of 70 kW (per sun/hr) of power for the campus, or 127,000 kW annually. The OFMC Project Manager is Andrew Robinson, a member of the Northern Cheyenne Tribe.

Mariano Lake Community School Breaks Ground

A pre-dawn ground breaking ceremony was held in November for a new 10,678 square foot gymnasium (seating approximately 650 people) and a 4,697 square foot library at the Mariano Lake Community School, located 25 miles east of Gallup, N.M. The K-6 school facilities are designed for an enrollment of over 200 students. The OFMC Project Manager is Tsosie Tsinhnahjinnie, a member of the Navajo Nation.

Indian Country DUI Mobilization Set for the Holidays

The BIA Division of Safety and Risk Management's Indian Highway Safety Program is again spearheading a holiday-related awareness of the dangers of driving while impaired. Publicity and stepped-up enforcement measures—including DUI checkpoints and saturation patrols on reservation lands—will likely reduce impaired driving across Indian Country. Mobilizations, which are concentrated efforts utilizing saturation or checkpoints to address traffic safety concerns such as seat belt use or drunk driving, have been effective in saving lives. The high visibility of the mobilizations and the stepped-up enforcement of traffic safety laws, combined with public information/education, are the main factors in the improved traffic safety on reservation lands during mobilizations, said Program Coordinator Patricia Abeyta, a member of the Cheyenne River Sioux Tribe. The two-week campaign, which also ran during the holidays last year, is funded by the National Highway Traffic Safety Administration (NHTSA) which helps pay overtime costs to mount the patrols.

The BIA's Indian Highway Safety Program is funded by the NHTSA and administered through the division, which is overseen by the Office of Facilities, Environmental and Cultural Resources. The Indian Highway Safety Program solicits annual grant proposals from federally recognized tribes in order to implement traffic safety projects on reservations. Requests for proposal are mailed in January and the deadline for submission is May 1, 2008. For information, contact Patricia Abeyta at (505) 563-5371.

New Mexico Schools and BIE Face Similar Challenges

In October, OFMC and Bureau of Indian Education (BIE) managers met with State of New Mexico Public School officials at the state capitol in Santa Fe to share the BIA's experience in projecting space needs for new schools. New Mexico officials were interested in the BIA's use of verifiable enrollment projection formulas, which were designed for rural school construction in Indian Country.



BIA and New Mexico officials meeting at the state capitol in Santa Fe were (from left) BIE Facility Management Officer Dale Keel; OFMC Architect Barbara Borgeson; New Mexico Public School Facilities Authority, Facilities Master Planning Manager William Sprick; New Mexico Public School Facilities Authority, Planning & Design Manager Martica Santistevan; New Mexico Legislative Council Service Director Paula Tackett; OFMC Chief of Planning Margie Morin; New Mexico Public School Facilities Authority, Executive Director Robert Gorrell; New Mexico Public School Facilities Authority, Building Standards Coordinator Andre Larroque; and New Mexico Public School Facilities Authority, Senior Facilities Manager Pat McMurray.

Hopi's First Mesa Elementary School Wins DOI 2007 Environmental Achievement Award

First Mesa Elementary School, which opened in 2004 on the Hopi Reservation in Arizona, has won the 2007 Department of the Interior Environmental Achievement Award, the second time in three years that a Bureau school has won the DOI award.



Project Manager Phil Sarracino (left) and OFECR Director Jack Rever accept the DOI award from Assistant Secretary Lynn Scarlett.

A 74,000 square foot, K-6 school serving 400 students, First Mesa was Arizona's first LEED Certified School and has been selected as a case study to encourage the construction of "green" school buildings throughout the state. First Mesa's Project Team received the 2007 award for Leadership in Energy and Environmental Design for a Certified Indian School. Baca/Dlo' ay Azhi Community School, which is also a Bureau school, won the award in 2004.



First Mesa students gather in a common area.

17 BIA-Operated Detention Centers Serve As Prototype to Establish Fixed Costs

Seventeen BIA-operated detention centers are participating in an effort to determine the base line cost of operating and maintaining (O&M) Indian Country detention centers, which are unique among OFMC-funded facilities because of their 24-hour-a-day use and resulting high energy consumption. While other government agencies operate detention centers, their base line O&M costs per inmate are not always comparable to Indian Country detention centers because there aren't standards for

building design, security systems, control panels, locking devices, etc. The 17 detention centers will fully implement FMIS, OFMC's electronic maintenance management system—utilizing work tickets, backlog and deferred maintenance while creating financial plans and work plans. Over time, FMIS will be able to present actual O&M costs for a BIA-operated detention center. Soon, the use of FMIS will be extended to all of the remaining BIA-operated and tribally operated detention centers receiving O&M funding.

Quinault Detention Center Redone

Photos taken in 2006 and again in November, 2007, show the refurbished exterior and kitchen at the Quinault Detention Center in Taholah, Wash.



OFMC and NIPTC Will Create DVD to Supplement Detention Center Training

OFMC will work with the National Indian Programs Training Center (NIPTC) to produce a DVD to provide training for BIA-funded detention center facility managers in the use of standard locking devices, security systems and control panels. The detention centers are moving toward standardizing their many systems, and this DVD will be relevant for years to come and be available for future facilities staff to view.



The hallway of Chief Leschi High School fills with students hurrying to their next class.



Fay Cortez-James and her daughter, Priscilla, members of the Muckleshoot Tribe, use the Chief Leschi Library.



Patrick McGregor teaches his sixth grade class.

The First BIA Replacement Schools Are Maturing to Adolescence; How Have They Been Performing?

The BIA Replacement School era began in the 1990s and was spurred on with major new construction funding increases in the late 1990s and early 2000s. Chief Leschi and Wa He Lut Indian schools were among the first new campuses built. How are they holding up?

Chief Leschi

The replacement school at Chief Leschi has spawned success for its graduates. Administrators report that the students are excited to address academic research projects using the school's extensive library, enhanced by the cutting-edge electronic instructional technology in use throughout the K-12 grant school in Puyallup, Wash. This has prepared many graduates for the demands of post-secondary education, administrators said. Also, the new school, which opened in 1996, devoted space for classes in career trades, such as woodworking, auto mechanics and culinary arts. School reports show that students are flocking to these trades classes, and recent graduation and postgraduate tracking reports show that the graduates are finding jobs in their chosen trades. "The old library was a joke, just some books on the fourth floor of a condemned building," one administrator said. "We didn't have the facilities for classes in the trades so no one was trained and ready for a job in these fields when they graduated." Enrollment and graduation rates for Chief Leschi are steady. Teacher turnover is a recent concern.

Roofing and HVAC have had issues—some based on normal wear and tear and some based on problematic design criteria, said Chief Leschi Facility Manager Aaron Foster. The vaulted hallway ceilings of the elementary and high school buildings have fixed windows and retain too much heat in the warmer months, necessitating the use of large portable fans situated at the open doorways to circulate the interior air. One of three underground main hot water pipes burst evidently because its design did not allow for proper expansion and contraction, and now all three pipes are being replaced to reinforce the heating delivery system. Major HVAC control system upgrades have been made to keep pace with modern technology. Some roof shingles for the extremely pitched roof areas have had to be replaced. Foster said that most maintenance needs for the replacement school buildings are common for a building that has been operating for twelve years.

The school's energy usage has increased dramatically over the past three years, which likely coincides with an increase in after-hours use of the buildings by tribal members in the community, Foster said. While the former Chief Leschi school was situated in the center of the tribal community, the replacement school was constructed on farm land on the outskirts of the community. Now a bus line links the school and the community, prompting many tribal groups to hold their functions at the replacement school.



Chief Leschi Facility Manager Aaron Foster.

School Energy Use

BTUs / square foot

	Chief Leschi	Wah He Lut
2005	56,877	68,273
2006	76,583	75,718
2007	85,485	60,141

FMIS Use by School

	Chief Leschi	Wah He Lut
Inventory Updated	Yes	No
Work Tickets	No	No
Scheduled Maintenance	Yes	No
Backlog	Yes	No
Emergency	Yes	No

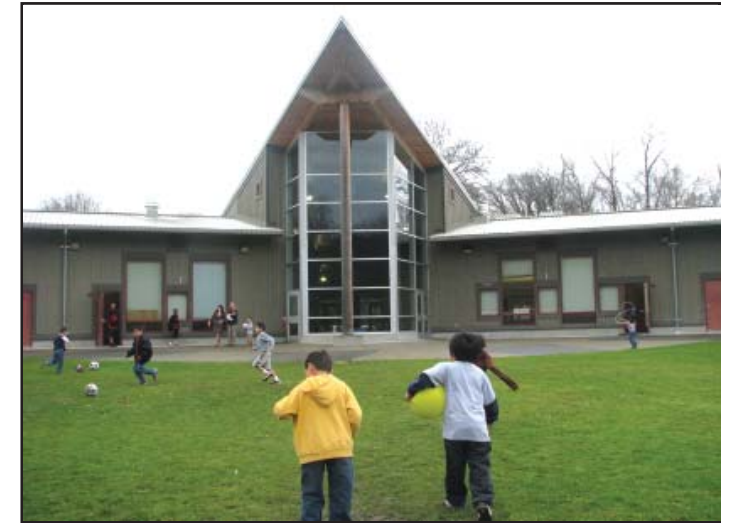


Chief Leschi Sophomore Charles Arabia, Cherokee, pulls muffins out of the oven during his Healthy Family Living class.

Wa He Lut

A decade after its opening in 1997, the Wa He Lut Indian School serving the Franks Landing Indian Community in Olympia, Wash., continues to inspire its K-8 students with its dramatic entry hall. A testimony to the respect students show for the building, which features a design inspired by the culture of the Northwest tribes, is the virtual absence of vandalism, said Facility Manager Jack Walker. "When we were housed at the Catholic girls school for a while (after the original Franks Landing school was flooded), we had a real problem with vandalism, but now students have a respect for the property and there is virtually no vandalism." He said the various building systems supporting the school have held up well over the past decade, the building foundation is elevated above flood-level, and there have been few structural defects. "I have one part-time maintenance worker and most of our time is spent responding to demands by the teachers and administration," Walker said. "We also spend time on maintaining the grounds." As a grant school with a limited staff, Wa He Lut has been slow to utilize FMIS. "We use subcontractors for the larger maintenance jobs, but most of the requests I get are mentally noted," he said, pointing to his head. The school's recent energy use has varied widely, which could be attributed to the need to familiarize many new students and faculty with proper use of the lighting, heating and cooling systems, said Walker.

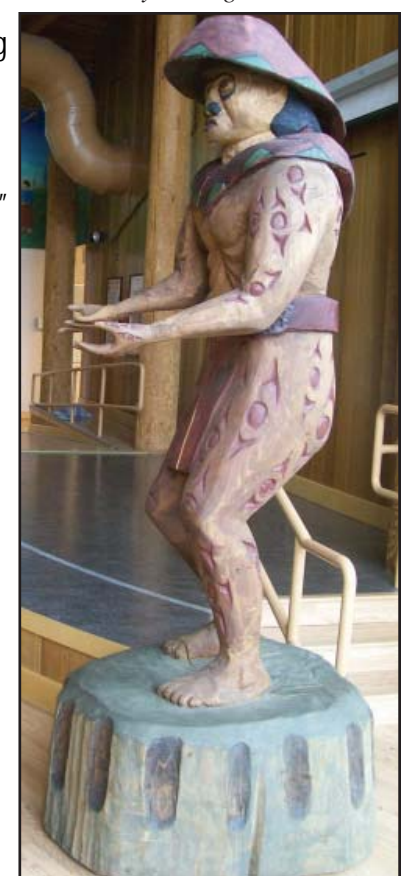
Wa He Lut is rebounding from a difficult two years in which the school's attendance dipped during a turnover in the student body and the teaching staff. The recent implementation of the State of Washington testing requirements has adversely affected the tracking of federal test scores at the school, which had regularly made the Annual Yearly Progress (AYP) goals.



Students exit their classrooms directly to the playground.



Wa He Lut Indian School Facility Manager Jack Walker.



A welcoming figure at Wa He Lut.

Focus



A phased demolition of old buildings will make way for the construction of the Dilcon Community School replacement campus north of Winslow, Ariz..

Increased OFMC Demolition Efforts Tied to Departmental Focus on Excess Space

Through its Asset Management Plan (AMP), OFMC is complying with Executive Order 13327 and is working with the Federal Real Property Council in promoting efficient and economical use of the Federal Government's real property assets. OFMC's Space Reduction Program utilizes five-year planning to help the Bureau of Indian Affairs reduce its inventory of excess space. Depending on tribal interest, transfer of vacant facilities can be in the best interest of the Government. The Bureau removes hazardous building materials such as friable asbestos prior to transfer. Following transfer, the Bureau no longer lists the facility in FMIS nor provides Operations & Maintenance funding.

Across Indian Country there are some Government facilities for which preservation is no longer economically feasible. These structures may have little historical significance. So with tribal and state Historic Preservation Office agreement, sometimes the most

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Pueblo Pintado Uses Geothermal, Subsurface Wetland

The K-8 Replacement School project for the Pueblo Pintado Community School near Cuba, N.M., will feature a geothermal heating and cooling system. Also, instead of an open cell sewage lagoon, the school will utilize a subsurface wetland and septic system, which lie eight inches under the grass playing fields. Both techniques will help earn an anticipated LEED Silver Certification.

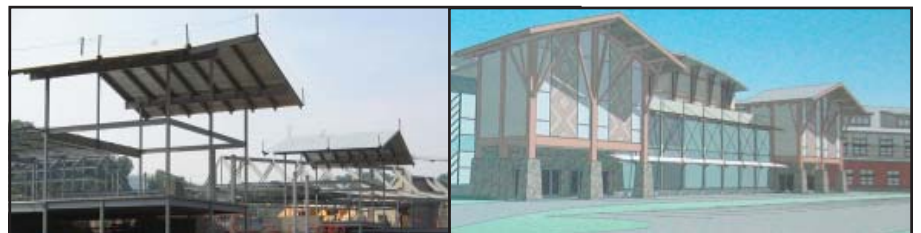
The new school will be 71,010 square feet and the dormitory will be 21,220 square feet, with room for 96 students. The school includes a gymnasium, a kitchen and dining area, and a library, along with home economics and wood working areas. It will support 387 students.



Students from Pueblo Pintado Community School (above) join Acting OFMC Deputy Director Emerson Eskeets in celebrating the September ground breaking for their new school (left).



Cherokee Replacement Campus Rises in the Smokies



As depicted in the rendering (above), the new art and cultural center at Cherokee Elementary and High School takes shape this fall (left), part of the overall replacement campus (lower left) near the Smokey Mountain National Park in North Carolina. The OFMC Project Manager is Leo Shirley, a member of the Navajo Nation.



Many Farms Shines During Condition Assessment

An on-going condition assessment of the BIA's facilities across Indian Country brought an assessment team from OFMC contractor, Applied Management Engineering, Inc. (AME), to Many Farm High School in Many Farms, Ariz., on the Navajo Reservation in November. The visit was memorable for AME Inspector Mary Lonski, compelling her to write about her experiences to Many Farms Principal Brian Dillon:

We wanted to thank your students for the politeness we observed and received during our visit.

On numerous occasions during our time at Many Farms, the students would pause on their path to offer assistance to (AME) team members by holding open a door or picking up something we had dropped. We also noticed the politeness between the students. When we overheard conversations in the hallways or classrooms, they were full of respect, concern, and care for one another. Your students' words regarding their teachers were very honorable and even had a sense of "honor without question" in their tone.

We found no graffiti or destruction to the property or buildings, even in a seldom used closet. Debris and trash was seemingly removed by the first student who noticed it. Their interest in our work was genuine and more than a passing curiosity.

Your students are needed in our next generation of society to continue to be shining examples of courteous and responsible citizens. The work you and your staff will have paid off for us all.

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advantageous decision regarding the continued use of a building is to have the OFMC Space Reduction Program provide funds to document its historical significance and demolish it. If a tribe is not interested in acquiring the facility and renovation is not feasible, timely demolition can alleviate health and safety risks caused by the structure standing vacant.



The Jicarilla Agency Building in Dulce, N.M., is demolished in October. The Agency offices are now housed in portable buildings.

Replacement Campus Is Underway in Washington

Muckleshoot tribal and school officials held a November ground breaking for their new 107,000 square foot replacement school campus in Auburn, Wash., serving grades K-12. The school is within sight of Mt. Rainier which is a sacred mountain for the Tribe. The OFMC Project Manager is Phil Sarracino of Laguna Pueblo. Also attending were OFMC Deputy Director Boyd Robinson and Chief of Planning Margie Morin.



School girls and dignitaries (below) break ground for the new Muckleshoot Tribal School (left).



The Space Reduction Program is operated by OFMC in cooperation with the Regional Facility Managers who assist in prioritizing demolition projects in their Regions. Discussing demolition often prompts tribal leaders to make difficult, yet heartfelt, decisions regarding the disposition of long-standing federal buildings that were the center of tribal life for decades. However, while there may be some emotional significance to the buildings, preservation and transfer of ownership may not be economically feasible for a tribe.

The overall objective of the DOI and the Federal Real Property Council is to right-size the federally owned asset inventories. This action will reduce the life-cycle costs for these assets, freeing funds which can be used to address the rising operational costs for mission critical assets.

HVAC

Variable Air Volume May Be Key to Reduced Energy Use

Installing variable air volume HVAC units during new school construction will help BIA and BIE meet the Energy Policy Act of 2005 requirement to be 30 percent more efficient than ASHRAE Standard 90.1, as cited in the Act. Currently, several OFMC Replacement Schools, such as Fond du Lac Ojibwe School in Cloquet, Minn., which opened in 2002, use this technology.

The key to energy savings with the variable air volume system is variable horsepower used to operate the main-unit fan, which (overall) is less than the horsepower needed to run the many fans in the several direct expansion HVAC units that would otherwise be necessary for a new school. Up-front costs for a variable air volume system exceed the initial expense of using



Fond du Lac Ojibwe School Building Engineer Brian Lafontaine shows the school's rooftop HVAC main chiller unit (above) and the heating units and air control panel (below).



several packaged, rooftop, direct expansion HVAC units for new school construction. However, installing variable air volume HVAC

equipment could pay off in the long run, said OFMC Energy Program Manager John Brown.

"Variable air volume systems, which feature one large HVAC unit, could reduce maintenance costs over time, since there is one motor and one group of fans that have to be maintained, compared to direct expansion HVAC, which has numerous individual units, each with its own motor, fan and belts," said Brown. He noted that the OFMC School Facilities Design Handbook sets energy use criteria based on ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers) and recommends using variable air volume systems or ground source heat pumps for new school construction projects.

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