Bureau of Indian Affairs

<u>Office of Justice Services</u> OFMC to Create Detention Center Design Handbook and Construction Standards

The Office of Facilities Management and Construction will create a handbook containing approved standard design templates for BIA-funded detention center construction for the Office of Justice Services (OJS). Standardizing construction processes and materials likely will produce overall program cost savings, foster sustainable structures, create more predictable Operations and Maintenance forecasting—and possibly instill the use of green building construction techniques.

The handbook will be presented to OJS and is in line with the direction of the Office of Management and Budget to improve building efficiency by creating standard design templates for new detention center construction. With the assistance of an Architecture or Engineering contractor, the handbook and construction standards will be compiled by a committee of BIA project managers, facility managers and safety officials, with input from OJS officials.

Among BIA-operated facilities, OJS detention centers are major users of energy because of their 24-hour operation. Government agencies, including the BIA, will be required to reduce facility energy consumption by three percent a year beginning in 2009, according to the Energy Independence and Security Act of 2007. Also, the 2007 Act requires a 55 percent reduction of fossil fuelgenerated energy consumption (compared with FY2003 consumption rates) for new construction and major renovation of Federal buildings in 2010—and a 100 percent reduction by 2030.

SIPI Aims to Become the Bureau's First "Zero Net Energy" Campus by 2012

The Southwestern Indian Polytechnic Institute (SIPI) intends to become the first "Zero Net Energy" campus in the BIA—generating all of its energy needs by 2012. Currently, the two-year college in Albuquerque, N.M., is generating part of its daily electrical energy requirement from solar panels outside its Science and Technology Building and its Early Childhood Education center and from solar collectors atop its 24,380 square foot gymnasium—the largest solar collector in the state using membranes containing lightweight, thin-film, photovoltaic cells. Peak energy generation of 60 kW per hour has been recorded by this gymnasium rooftop solar collector. Solar collectors will be installed atop SIPI's 11,641 square foot administration building.



Solar collectors are installed atop the SIPI gymnasium and will also be installed atop the administration building.



Acting SIPI Facility Manager Gary Trujillo (left), Isleta Pueblo, and OFMC Project Manager Andy Robinson, Northern Cheyenne, supervise solar collector installation.

Prior energy saving projects at SIPI have included installing movement-sensitive light switches, using T-8 fluorescent bulbs (which require about 40 percent less energy than larger T-12 bulbs) and replacing windows in campus buildings, most of which were constructed in the early 1970s.

SIPI will install individual solar lighting fixtures for sidewalks and parking lots, and wind power turbines are being discussed. SIPI President Jeff Hamley said some of the energy saving techniques are being incorporated into the college's engineering technology curriculum. "We want our students to take advantage of the very real science that is taking place right here on our campus," Hamley said.

Briefs

Four BATmobiles Coming to Indian Country for Tribal Use

The BIA Indian Highway Safety Program is funding four Breath Alcohol Testing vehicles for use by tribes in Office of Justice Services (OJS) Districts IV and V. (OJS District IV covers New Mexico tribes; OJS District V covers tribes in Montana, Idaho, Wyoming, Washington and Oregon). Tribal law enforcement agencies can reserve the vehicles for use, especially during Drunk Driving mobilizations on reservations. Two vehicles will be stationed in Billings, Mont., and later, a vehicle will be stationed with a northern New Mexico tribe and another one with a central New Mexico tribe.

DSRM Gets Current With Annual Safety Inspections

The Division of Safety and Risk Management (DSRM) is getting up to date with its annual workplace inspections and evaluations. DSRM hired a contractor to visit Indian Country sites that were needing an annual safety inspection, focusing on schools and dormitories, detention centers and administrative facilities. The inspectors were looking for the existence of—or potential for—unsafe or unhealthful conditions and safety, health or accessibility violations or deficiencies.

"Don't Shatter the Dream" Resumes Holiday Crackdown

The BIA Indian Highway Safety Program is again spearheading a holiday-related awareness of the dangers of driver while impaired, called "Don't Shatter the Dream," from Dec. 21, 2008 to Jan. 3, 2009. Steppedup enforcement measures—including DWI checkpoints and saturation patrols on reservation lands—are aimed at reducing impaired driving across Indian Country.

Muckleshoot Tribal School Grows Near Mt. Rainier

The 107,000 square foot Muckleshoot Tribal School replacement project in Auburn, Wash., is being constructed with extensive use of daylight and will emphasize the site's view of Mt. Rainier, which is a sacred mountain for the Tribe. Because of the large amount of precipitation, the K-12 campus will feature rain gardens. The OFMC Project Manager is Phil Sarracino of Laguna Pueblo.



This architect's rendering shows the Muckleshoot Tribal School's orientation toward Mt. Rainier.

A rain garden is being planned in front of this building at Muckleshoot.



Beclabito Day School Breaks Ground for New Campus

A 32,991 square foot replacement campus is underway for Beclabito Day School, east of Shiprock, N.M., following an October groundbreaking ceremony. The



OFMC Supervisory Engineer Emerson Eskeets (left) watches as Beclabito students "enter" their new school.

Kayenta Community School Progresses

The 103,000 square foot, K-12 replacement campus for Kayenta Community School in Arizona is under construction (right) to serve 442 students. The OFMC Project Manager is Phil Asmus. project includes classrooms, a library, a gymnasium, and a kitchen and dining facility, along with three new employee residences and a new vehicle shop. The K-4 school serves 128 students. The OFMC Project Manager is Phil Sarracino of Laguna Pueblo.



Gathering dirt during the groundbreaking ceremony.



St. Stephens Indian School's High School Will Leave Old Mission Buildings Behind



The 40,000 square foot replacement high school for St. Stephens Indian School in Wyoming will adjoin the campus of St. Stephens Elementary School, down the road from the current high school site on the grounds of St. Stephens Mission

where it has been operating for over 100 years. *Color guard at groundbreaking ceremony in October.*



St. Stephens High School (seen in the background) is located on the site of St. Stephens Mission.



Architect's rendering of the St. Stephens High School replacement campus.

Detention Centers Tohono O'odham Breaks Ground; Warm Springs Gets Award; Energy Pilots Underway

The new Tohono O'odham Nation Detention Center will rise next to the old facility in Sells, Ariz. The new facility is funded by the U.S. Department of Justice; the renovation of the old facility is funded by OFMC. The detention center complex will have an overall capacity of 133 inmates, including eight beds for juveniles, 20 beds for females and 105 beds for adult males.

The Warm Springs Detention Center and staff was recognized by the BIA's Office of Justice Services (OJS) for its superior detention center program, including its facilities. The Detention Center received the highest inspection score among OJS facilities inspected in 2007, with a cumulative score of 92%.

OFMC Energy Program pilot projects are underway at the Hopi Rehabilitation Center in Arizona and at Ute Mountain's Chief Ignacio Justice Center in Towaoc, Colo. The pilot projects are intended to determine whether energy savings techniques, including a possible solar hot water booster system, can reduce the detention centers' use of energy. The pilot projects could yield measurable results in one year. The 62 BIA-funded detention centers at 51 locations across Indian Country have a unique mission among BIA-funded facilities because they must operate at peak capacity around the clock for the sake of their inmate populations. New design guidelines and construction standards for BIA-funded detention center projects could meld energy savings design considerations while satisfying programmatic design priorities, such as cellsize and positioning and security surveillance. However, saving energy at existing detention centers such as Hopi and the Chief Ignacio Justice Center will focus on retrofitting the facility with energy savings techniques, including alternative energy applications such as solar power generation. For example, an energy audit at the Chief Ignacio Justice Center recommended a more efficient HVAC system, staged hot water heating based on expected load, and occupancy sensors for lighting control.



September groundbreaking at the Tohono O'odham Nation Detention Center.

Taking the LEED

LEED Certification is being sought for dozens of BIA-funded school construction projects across Indian Country.

St. Stephens Indian School

LEED Certified Schools LEED Registered Schools

As of November 2008

Ojo Encino Day School

Turtle Mountain High School

Standing Rock Elementary School

Muckleshoot Tribal School

Chemawa Indian School Dormitory

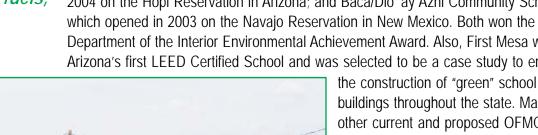
St. Francis Indian School Pine Ridge Dormitory Porcupine Day Schoo Loneman Day School Meskwaki Settlement School

On Feb. 7, 2006, OFMC issued this memorandum: "All new buildings, for which a commercial design contract, a design phase grant or design phase Pub. L. 93-638 contract has not been awarded, shall be designed and constructed to meet LEED (Leadership in Energy and Environmental

By minimizing the negative environmental impacts in design, construction and operation, LEED Certified buildings provide a healthier indoor environment, rely less on fossil fuels, and cost less to operate.

Chrooshgai Community School Dormitory Design) requirements." LEED is a rating Jeendeez a Academy Navajo Prep Fine Arts; Student Center system defined by the U.S. Green Building Council (USGBC). A point-based system is Dilcon Community School Pueblo Pintado Community School used to assess design choices in siting; water aca / Dlo'ay Azhi Community School efficiency; energy and atmosphere; materials and resources; indoor environmental quality; as well as continuous measurement and verification capability of a building's energy consumption. Currently, OFMC requires buildings to be designed to obtain, as a minimum, a USGBC Silver Certificate using USBGC's LEED version 2.2 requirements. However, this requirement likely will be updated to USGBC's new "School" requirements.

Two BIA schools are LEED Certified: First Mesa Elementary School, which opened in 2004 on the Hopi Reservation in Arizona; and Baca/Dlo' ay Azhi Community School, which opened in 2003 on the Navajo Reservation in New Mexico. Both won the Department of the Interior Environmental Achievement Award. Also, First Mesa was Arizona's first LEED Certified School and was selected to be a case study to encourage





The replacement school construction site at Leupp, Ariz., featured separate bins for proper disposal of construction waste, frequently a LEED rating system point. Bureau of Indian Affairs, Office of Facilities, Environmental and Cultural Resources

buildings throughout the state. Many other current and proposed OFMC school construction projects are registered with the USGBC, which indicates the intention to seek LEED Certification. Also, OFMC will be constructing a fire station at Nazlini Community School in Arizona as part of its Structural Fire Protection Program that is anticipated to seek LEED Certification as well as being the Department of the Interior's first Zero Net Energy building.

Cost to Seek LEED Certification Limits Some Projects; Preparation Can Make the Difference

Cherokee Elem

nd High Sch

The cost of obtaining LEED Certification can squeeze a project's budget if there has not been preparation for the LEED registration and certification process. "It's best to provide for it right out of the shoot," said Daren Peterka, project engineer for Interstate Engineering in North Dakota. He oversaw the Ojibwa Indian School replacement school project that was dedicated in Belcourt, N.D., this summer. "We got involved at midpoint and there were already design cutbacks taking place, so we couldn't put funds toward LEED Certification. But even when you don't get the actual Leed Certificate, there are environmental benefits, the commissioning is valuable and there are future Operations and Maintenance savings that will occur by following LEED guidelines."

Albuquerque architect Dyron Murphy and his firm, Dyron Murphy Architects, Inc., minimizes LEED Certification cost for his clients, including OFMC, by making LEED Certification standard operating procedure early in design and planning for a project. For example, the premium for Murphy's green design of the Ch'ooshgai Community School Dormitory in Tohatchi, N.M., is practically negligible, except for LEED administration and commissioning costs. The few features and systems that add cost have short-term pay backs, i.e., the reduced flow fixtures and a waste water heat recovery system reduces water and energy consumption dramatically, and the grey water produced in the building is used to water xeric landscaping. Without the use of grey water, landscaping on the scale envisioned for this project would have been out of the question.



Constructing Baca / Dlo'ay Azhi Community School, a LEED Certified BIA school.

OFMC School Projects in Progress; LEED "Silver" Rating Anticipated

- 1. T'iists'oozi'bi'olta (Crownpoint)
- Twin Buttes Day School
- Bread Springs Day School
- Circle of Life Survival School
- Keams Canyon Elementary School
- Loneman Day School 6.
- Chinle Boarding School
- 8. Pierre Indian Learning Center

Arizona North Dakota New Mexico Minnesota Arizona South Dakota Arizona South Dakota

Navajo Prep Adds Fifth Dormitory, Student Center

Focus

OFMC Deputy Director Reflects

I would like to take a moment during my last weeks here at OFMC to reflect on the

ground we have covered over the last 20 years since I joined the Indian Affairs Facilities Management Team and some significant opportunities that lie ahead.



It seems like only yesterday when I filled the Regional Manager position in 1988 in Anadarko, Okla,. and Frank Tartsah, the current OFMC Southern Plains Region Facility Manager, began to teach me "the business." I was soon logging on to the FACCOM database, gathering my project requests, and traveling to D.C. to argue for my priorities to be added to the huge yellow spreadsheet which served as the DOI Capital Commitment Budget. School **Replacements and Major Improvement** Projects were out of the question at that time with only one replacement school per year being planned nationwide. The next year I moved into the Regional Facilities Manager position in Albuquerque for two years and then walked to Gold Avenue to begin my tenure here at the Facilities Management and Construction Center (FMCC) as OFMC was then known.

The 90's were spent dealing with the 50% Reduction In Force (RIF), many Life Safety issues and the Sen. John McCain Reports, as well as re-engineering our FACCOM database into the Facilities Management Information System (FMIS) that we so depend on to the present day. I remember looking around the room during our many, *continued on page 7* A hogan and a student vegetable garden are situated near the new dormitory at Navajo Preparatory School in Farmington, N.M. The dorm is the fifth constructed at the school.



The three-phased replacement of the Navajo Preparatory School in Farmington, N.M., is nearing completion with the construction of a fifth dormitory and a 34,000 square foot student center. Four new dormitories were occupied in 2003 as part of Phase One, funded by the Navajo Nation. Then, Phase Two was accomplished in 2007 when a new athletic center was completed adjoining the old gymnasium and when three historic classroom buildings were linked via an enclosed breezeway. Phase Three includes the fifth dormitory, the student center and athletic fields. A fine arts building was designed and approved as part of Phase Three, but funding for its construction is being sought from sources other than the BIA. The student center and fine arts buildings are anticipated to receive LEED Silver Certification.

Phase One dorms at Navajo Preparatory School are aglow as evening falls.



Road to Bread Springs School Paved With Cooperation

The site of the Bread Springs Day School replacement campus is one half mile from New Mexico Highway 602. The Navajo Nation and BIA joined to fund the water tank and an access roadway (shown below) to reach the site of the 32,192 square foot school that will serve 150 students.



OFMC Supervisory Engineer Emerson Eskeets (left), BIA Project Manager Melvin Tsethlikai and 3 year old Ernestine Pete at the September groundbreaking.



Bureau of Indian Affairs, Office of Facilities, Environmental and Cultural Resources



San Felipe Pueblo Elementary School gymnasium and middle school addition nears completion.

Middle School Joins San Felipe Pueblo Elementary

A 53,000 square foot middle school and a gymnasium were added onto the San Felipe Pueblo Elementary School, located north of Albuquerque, N.M. The elementary school was K-4, though it had been established as a K-8 school, pending the project to add additional classroom space. The gymnasium will seat 900 people. The project included a tie-in to a new sewage treatment plant built at the same time. The OFMC Project Manager is Dennis Rodriquez of Laguna Pueblo.

Schools Scheduled to Receive Portable Classooms FY 2008/2009				
School Number of Buildings		School Number of Build	Number of Buildings	
Rosebud Dormitory, S.D.	1	Coeur d' Alene Tribal School, Id.	2	
Riverside Indian School, Okla.	2	Takini School, S.D.	4	
Cove Day School, Ariz.	1	Theodore Jamerson		
San Ildefonso Day School, N.M.	1	Elementary School, N.D.	1	
Tate Topa Tribal School, N.D.	1	Northern Cheyenne		
Blackwater School, Ariz.	2	Tribal School, Mont.	<u>1</u>	
Nah-Ah-Shing School, Minn.	1	Total	17	

Mariano Lake Gets New Gymnasium and Library

A new 10,678 square foot gymnasium, which will seat approximately 650 people,

and a 4,697 square foot library are being completed at the Mariano Lake Community School, located 25 miles east of Gallup, N.M., on Navajo Route 49. The K-6 school for 200 students had been situated within the highway's right of way. The highway was rerouted away from the school as part of the project. The

OFMC Project Manager is Tsosie Tsinhnahjinnie, a member of the Navajo Nation.



The Mariano Lake Community School Library (above) has a hogan shape. The gym (below) will seat 650.



continued from page 6

many development sessions and marveling at the "genius" of both Indian and non-Indian expertise that launched this stateof-the-art management tool for our program.

The next decade brought the over-anticipated Y2K bug, an amazing ninth-hour 300% increase to our Education Construction budget and OFECR Director Jack Rever, our D.C. champion. Just as we had our increased project load stabilized, our budget increases acquiesced to the war on terrorism. Yet, we are able to look back on an amazing number of completed school projects and business process improvements.

Alas, improvement and change never ends. Just ahead is our transition of our client-server FMIS to a DOI Enterprise Maintenance Management System; an OMB Business Process Re-engineering Initiative; right-sizing and re-alignment of our Employee Housing Program; master planning for future program needs and available funds; expansion of tribal participation in General Administration Office space through our Direct Leasing programs; energy management innovations; improved Environmental Hazard management and integration of Business Information Modeling strategies.

I believe you all to be an amazing group of men and women who do incredible things against overwhelming odds. I know you are up to the tasks ahead. My only regret is that I can not personally shake each of your hands as I depart. Thanks to my family and all of you for your support and respect. Ha Ho

- Boyd Robinson, OFMC Deputy Director, Nothern Cheyenne Tribe

Interior Secretary Kempthorne Reviews Tuba City Construction, Praises Maintenance

Department of the Interior Secretary Dirk Kempthorne toured Tuba City Boarding School in October, assessing the progress of the Arizona replacement school project. The 191,153 square foot

construction project had been sus-

ago and is now nearing completion.

impressed" with the K-8 school which

youthful employment experience in

hospital maintenance, Kempthorne

serves 1,160 students. Also, noting his

praised the Tuba City Boarding School

facilities maintenance staff. "I know it's

hard to keep floors like these clean,

and you are doing a wonderful job,"

Kempthorne said.

According to his news release,

Kempthorne was "extraordinarily

pended but was revitalized three years



The library (left) adjoins a classroom building.



Old and new buildings share the campus.

the beginning of this administration, 60 percent of Indian schools and dormitories were classified as being in poor

Kempthorne said Tuba City Boarding School exemplifies the progress being made in improving the condition of Indian schools. "At

ere classified as being in poor condition. By the time we complete construction and renovations authorized under the 2008 budget and proposed for the 2009 budget, we will reduce that figure by half. Of the 90 American Indian school construction projects authorized so far, 48 have been completed, and 42 are under construction or design," Kempthorne said. "The result is that more than 26,000 Indian children will soon have an opportunity to study in a new or refurbished modern school."



OFECR Director Jack Rever (center) discusses the Tuba City Boarding School project with Secretary of the Interior Dirk Kempthorne (left) and OFMC Supervisory Engineer Emerson Eskeets.

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OFFICIAL BUSINESS

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OFECR

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