

Please Pardon Our Dust

The Construction Projects Roundup at JSC

By Robert P. Kehoe

A lot of construction is happening around Johnson Space Center. More projects are planned.

"We are proud to be doing what it takes to keep the center operating day-to-day," said newly appointed Center Operations Director Bill Parsons. Construction projects are part of that effort. "We are committed to having a robust construction program by doing more with the resources we have," he said. "A robust construction program fits in well with the Center Operations Directorate goal of providing products and services that make JSC a dynamic and vital center for manned space flight."

COD functions include logistics, environmental compliance, security, facility engineering, and maintenance and operations. The directorate and the Base Operations Support Services contractor, Brown & Root Services/Pioneer, form a strategic team for meeting JSC's infrastructure needs.

The Construction Office, part of the Plant Engineering Division, manages construction projects at JSC. Five civil servants manage construction activity at the center. They team with Gilbane Building Co. which provides independent construction inspection and management services.

"Most of our recent construction activity that you have been seeing is either repair, modification, or rehabilitation work," said Bill Roeh, chief of the Plant Engineering Division. "We have not had the thrust of large, new construction projects like there were seven or eight years ago in support of the International Space Station."

A number of construction projects are either in progress or just being completed:

- ◆ A \$300,000 Genesis project in Bldg. 31 will involve construction by BSRP of a world-class clean room to meet JSC's contamination and curatorial responsibilities for the upcoming Genesis solar wind sample return mission, the first extraterrestrial sample return mission since the Apollo era.

- ◆ A \$4 million upgrade to the JSC site electrical substation begun two years ago will be completed this year by Gardner-Zemke Construction Co. It includes replacement of some of the components installed when the site was first built. It is the last of a series of projects that have revitalized the substation.

- ◆ A \$5 million second phase of upgrades to the 3.5-mile tunnel system under JSC is just being completed. In this phase C. L. Vick Construction Co. added lights and emergency backup power for them, ventilation fans and sump pumps, additional fire suppression, new structural crossovers and exit structures. Old communications cables were removed and groundwater seep areas were dried. A third phase could begin as early as Christmas.

- ◆ BSRP is building a 31- by 54-foot, \$300,000 welding shop at Ellington Field. It will enable employees to work on much larger aircraft parts in a much safer environment.

- ◆ The \$5 million phase of major upgrades to the Central Heating and Cooling Plant, Bldg. 24, is half finished. Five of the huge 2,000-ton capacity cooling towers behind Bldg. 24 are being replaced by C. L. Vick Construction Co., Inc. Two of the new towers have to be finished before Houston's warm weather. The three others will be replaced next winter.

- ◆ The mile-long trench on the south side of Avenue B is part of the installation of 12 new fiber optic links between Bldg. 44 and the Sonny Carter Training Facility for ISS communications system testing. Contractor TCI Network Solutions should complete the work in early April.

- ◆ Major modifications at Bldg. 29 will accommodate the new Bio-Plex complex. This \$2-million project in the building's old "WETF" includes four new 15- by 30-foot steel cylinders and backup utilities for closed cycle, controlled growth environmental experiments.

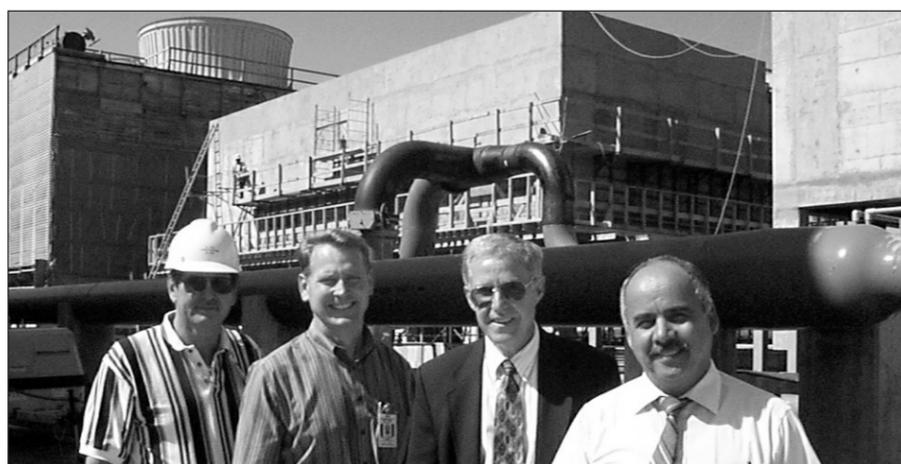
- ◆ The 200 and 300 areas have just had their overhead high-voltage electrical wires replaced by a \$1-million project. The construction contractor was Barnes Electric. ■



The Site Electrical Substation Construction Team, from left, includes Bill Harkleroad, project superintendent, Gardner-Zemke Construction Co.; Reinhard Brueckner; Ben Richardson, Gilbane Construction Co.; Marvin Bennett, NASA construction manager; and Bud Nichols, project engineer.



The Phase 2 Utility Tunnel Upgrade Construction Team, from left, includes Ray Burnette, Gilbane Building Co.; Jim Jones, project superintendent, C. L. Vick Construction Co. Inc.; Bob Kehoe, NASA construction manager; and Steve Campbell, project manager.



The Bldg. 24 Cooling Tower Construction Team, from left, includes Jim Jones, project superintendent, C. L. Vick Construction Co. Inc.; Gary Gastler, Gilbane Building Co.; Gene Hajdik, project engineer; and Tom Khalili, NASA construction manager.



The Bldg. 29 Bio-Plex Complex Construction Team, from left, includes Terry Tri, EC3; Tom Khalili, NASA construction manager; Gary Gastler, Gilbane Building Co.; and Henry Wyndon, project engineer.



The BOSS Contract Construction Team, from left, includes David Vice, BRSP superintendent; Gary Ridgway, BRSP construction manager; Doug Whitmarsh, BRSP superintendent; Greg LeSturgeon, NASA construction manager; Billy Isabell, BRSP superintendent; and Kyle Swensen, BRSP superintendent.

Many construction projects are about to begin

- ◆ May should see the start of the first phase of streetlight replacement or renovation across the main JSC campus area. The \$800,000 project will be followed by more streetlight repair over the next several years.

- ◆ Buildings 1, 3, 30A and MOW, and 31 will all have original roofs replaced soon. In April, the road in front of Bldg. 1 will be replaced in a 60-day project that will change traffic patterns in the area.

- ◆ Buildings 5 and 16 will get upgrades to fire sprinkler systems. The work, to begin in April and to be finished in five months, will be done after hours and on weekends by Arteaga Construction Co.

- ◆ Chiller No. 2 in Bldg. 48, the Emergency Power Building, is being replaced to add to backup cooling capacity to the Bldg. 30, the

Mission Control complex. Contractor BRSP is about half-way through the \$600,000 project.

- ◆ Another Bldg. 48 project involves installation of a new transformer. The \$500,000 project will allow greater flexibility and reliability in providing emergency power to Mission Control.

"Construction at JSC is a total team effort," said Grady Owens, chief of the Facility Development Division. Its design engineers, the Plant Engineering Division Mechanical Operations Office engineers, Electrical Operations Office engineers, the BJ3 procurement staff, NT2 safety staff with Hernandez Engineering Inc. safety engineers, JB2 security specialists, BRSP engineers and support staff, the JJ4 construction

managers, and the Gilbane construction engineers "really make for an effective team," he said.

The team guides each project through the definition phase, the design phase, and finally through the construction phase, which generally takes three to four years. "The people who work these construction projects are challenged in some very unique ways," Owens said. "But it's apparent that they are having some fun along the way."

"If you think these projects are fun," said Parsons, "wait until we build the proposed 10-acre simulated Lunar and Mars landscapes along Avenue B. It will be a great place to take a break and reflect on the space program and its future." ■