DISNEY IMAGINEERING'S DESIGN APPROVED FOR SPACE CENTER HOUSTON

In two important advancements, the Board approved the preliminary plans for the new JSC visitors center and named the facility Space Center Houston (See sidebar p. 5). Space Center Houston will do more than just help guests appreciate manned space-flight, according to preliminary plans. "We want a visible measurable difference in behavior between those who have visited and those who have not," states the Walt Disney Imagineering design team proposal that was given a unanimous go-ahead April 25 by the Board of Directors. "After all, if Space Center Houston doesn’t make a difference, then Space Center Houston is unnecessary. We are determined to make a difference."

The design schematics, which describe the real-life, experiential philosophy behind the visitors center as well as its contents, envision a 140,000-square-foot, two-level, dome-topped building capable of allowing more than 6,500 visitors per hour to be “insiders” at JSC through a day of experiences, live demonstrations, live coverage of on-going missions, big format film and video, historical exhibits, and a tour of behind-the-scenes action led by a special breed of guides who are knowledgeable spokesmen for the “real stuff.”

Attractions will include a Feel of Space demonstration area, a Mission Status Center, a Space Shuttle Crew Trainer, a Space Station habitation module, a large-format film theater, a Starship Gallery of space artifacts and a tour through Skylab, America’s first Earth orbiting space station. A gift store and two dining areas will offer a moment’s rest and diversion.

Admission is expected to cost about $5 a person, and the Foundation predicts that two million people will visit Space Center Houston and JSC in the first 12 months after opening day in early 1991.

Space Center Houston is not supported by tax dollars; an admission charge is required to operate the center. "We are determined to keep the admission price within reach of anyone who wants to visit," said Harold Stall, foundation president. "All Americans See Design, P 2

Artist concept of the entrance to Space Center Houston, seen from the south. The facility is designed to accommodate 6,500 visitors per hour. Two million visitors are expected the first year of operation.
are partners in NASA's work. We want to be certain that none is excluded on account of cost. We will offer this exciting day of experiences and behind-the-scenes tours for a price that compares favorably with a movie ticket or a bleacher seat at the ballgame." Special arrangements will be made for school classes on field trips, Stall said.

As they enter Space Center Houston, guests will pass directly beneath a real Skylab spacecraft, suspended from the ceiling in its full space-borne configuration. Later, there will be an opportunity to go aboard the orbiting laboratory that was home to American astronaut scientists for 171 days in 1973-74. They will be visually lured into a large theme plaza whose domed ceiling soars eight stories overhead. A giant video screen facing the entry will show live television from space and other mission activities, creating a "Times Square" effect. Here visitors will be presented with an exciting array of activities and experiences to choose from. All are designed to accommodate the handicapped.

On the main floor, visitors will find the Feel of Space, a demonstration area where "physical, tactile experiences challenge the guests' senses, intellect and imagination while learning important concepts about spaceflight."

Preliminary plans call for six Single System Trainers, adaptations of actual astronaut training systems, where guests may try to dock the Shuttle to the Space Station or save themselves from pressure loss in a Space Suit Failure Simulator; two Mechanical Hands-On Stations where they may try to tele-operate a remote mechanical hand or find out what it's like to manipulate a space suit's pressurized gloves in a vacuum glove box; and two Mini-Environments, which will include a walk-through Shuttle crew compartment trainer and an Open-Back Space Suit that gives a faceplate view into a diorama of the Space Station in orbit and a giddy vertigo sensation.

A large, Living in Space demonstration will be presented by guides using a break-apart Space Station habitation module. The guide will select volunteers to participate in demonstrations of food preparation, eating and drinking, sleeping, medical treatment and operation of the zero-gravity shower and toilet. Other guests will watch as the six go through their "training."

Two smaller live demonstration areas will make use of a multi-axis personal tumbler to let some adventurous visitors try their "right stuff" with six degrees of freedom, and an air-bearing floor to let others challenge the leverage problems of weightlessness while trying to retrieve a satellite or perform some other extravehicular activity using a manned maneuvering unit (MMU).

"The audience very much wants to do things which enable them to fantasize that they are a part of the Space Program," the Disney team led by Bob Rogers wrote. "These fantasies usually center on being an astronaut. Young to middle aged people fantasize this for themselves. Parents and grandparents enjoy the dream through the response of their children."

Also in the "experience it/imagine it" vein is a big format film theater that will follow astronauts and Mission Control teams through their training, culminating in a flight simulation training exercise and finally, a launch.

"Although the proposed title is 'To Be An Astronaut,' the subject of manned space flight cuts across dozens of disciplines," the Disney report states. It will focus on the larger team approach which includes the full spectrum of JSC professionals who contribute to a successful space flight.

The film, which will use Imax or a similar large format, will depict what is going on at JSC and give visitors insight into the many challenging emergency situations that astronaut crews and the JSC flight controllers train for in simulations and the everyday side of astronauts' lives.

Elsewhere, the Mission Status Center, will permit guests an insider's view of actual missions in progress with live, in-person commentary by guides or JSC experts. Three large-screen monitors and several smaller monitors will display live television from space and in the Mission Control Center.

"This is where we can get the flesh and blood contact between JSC's people and the public," Stall said.

Just past the Mission Status Center will be the Destiny Theater, where guests will share the adventures of NASA's past accomplishments on an emotional "gut level." Viewers will gain new insight into the true promise of America's space program—not a series of isolated stunts, but the
The Theme Plaza serves as a central core to Space Center Houston's attractions. The tram to the Johnson Space Center boards under the large format TV screen in the center of this artist concept.

The beginnings of a great adventure full of daring, dedication and destiny in the highest of human traditions.

On the upper level, one can view the wonders of the Starship Gallery, where space artifacts will be transformed into memorable adventures by vividly capturing the impact of a pivotal moment in space faring history. They will be recognized not as dead artifacts of the past, but stepping stones in the path to the future.

The Apollo Lunar Module (LM) and Lunar Rover, for example, will be displayed on a forced-perspective landscape that gives the uncanny impression that visitors are elbow-to-elbow with the rover's crew on the Moon's surface and that the LM is miles away on the lunar horizon.

Space suit evolution will be traced by exhibiting each suit as a particular astronaut might have worn it, along with personal memorabilia of that astronaut.

After crossing a catwalk to look through America's first space station, Skylab, visitors will return to the main floor on an escalator that passes through a high fidelity mockup of the Space Station Habitability Module NASA is currently designing. A tram tour of JSC will convey groups of 190 people on a tour of JSC, with stops provided at areas of interest such as Mission Control, the Weightless Environment Training and a closeup look at the astronaut's Shuttle trainers. The opportunity to catch a glimpse of the astronauts in their daily working environment gives this tour a special appeal.

Space Center Houston has been designed to provide a core of understanding for the visitor's tour by tram. The new facility will enhance that experience and make it manageable for visitors numbering in the millions.

To make the day-long adventure comfortable, Space Center Houston will provide its guests two restaurants, one fast food and the other a full-service dining room. Adventuresome visitors may even be able to sit down to a complete space food meal served in authentic containers. A gift store will include a photo studio where guests may pose for mementos of their visit that show them on the Shuttle flight deck or floating weightless in the Space Station.
Volunteer visitors will be able to attempt a rendezvous with a satellite mock-up on an air-bearing floor.

A full-scale Shuttle orbiter crew compartment will be open for visitors to get a close-up look at the world's most exciting flying machine.

PROFILE: JOE M. BAILEY

Joe M. Bailey has served as President and Chief Executive Officer of NCNB-Texas since June 1987. Previously, he was Chairman and CEO of the Houston Banking Division of InterFirst Corporation.

Mr. Bailey's considerable banking and financial experience has been extremely valuable to the foundation. "Space Center Houston is an important project for Houston and the Johnson Space Center. It symbolizes the spirit and progress of American manned space exploration. The board is committed to establishing and maintaining civic and business support for the project," said Bailey.

As a board member, Bailey devotes many hours of his personal time guiding and observing the progress of Space Center Houston, "I became involved with Space Center Houston because I believed the visitor center would play an important role in the future of manned space flight. Helping the foundation requires dedication, but it is a rewarding experience."

Bailey is also a member of the Greater Houston Chamber of Commerce; the University of Houston Board of Visitors; the Board of Directors and Executive Committee of the Rice Center; and serves on the Governor's Select Committee on Tax Equity.

PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Show &amp; Facility</th>
<th>Apr '88-Dec '88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Development</td>
<td>May '89</td>
</tr>
<tr>
<td>Ground Breaking</td>
<td>Jan '89-Aug '89</td>
</tr>
<tr>
<td>Detailed Show Development</td>
<td>Aug '89-Jul '90</td>
</tr>
<tr>
<td>Construction</td>
<td>Aug '89-Nov '90</td>
</tr>
<tr>
<td>Open to the Public</td>
<td>Jan '91</td>
</tr>
</tbody>
</table>
SPACE CENTER HOUSTON TEAM FINALIZED

The Board has completed the team for Space Center Houston with the selection recently of construction managers and the architect and engineering firm for NASA's newest attraction.

- A joint venture of CRS Srrine and Linbeck Construction was selected to perform construction management duties for Space Center Houston, including the coordination of the overall design and construction project, value engineering recommendations, constructibility assessments, reviewing and commenting during design reviews.

In addition, CRSS-Linbeck will coordinate design and construction of the facility and act as a cost and constructibility consultant.

CRSS-Linbeck teamed up to complete IBM's new facility in Clear Lake City recently and have proven they can be successful partners.

"We're thrilled to be a part of the innovative concepts and synergy between Disney and the foundation," said Peter Doyle, president of Linbeck Construction. "It's going to be a demanding and exciting project; one that we are very excited about."

- Pierce Goodwin Alexander has been selected for contract negotiations to provide architectural and engineering services for the facility. The firm will work with CRSS-Linbeck construction management team and Walt Disney Imagineering to produce architectural drawings, to develop the master site, utility and permit planning and to design architectural treatments for the building.

"Our firm is honored to be chosen as a member of the Space Center Houston team and to have a role in the creation of a state-of-the-art visitor center," said Earl S. Alexander, managing partner of the firm.

- Providing accounting and feasibility studies for the project is the accounting firm of Price Waterhouse, who has worked with the Foundation for more than a year. Legal counsel is the law firm of Vinson & Elkins, selected because of its extensive expertise and national reputation.

- Financial advisors for Space Center Houston are Underwood Neuhaus & Co. and Shearson Lehman Brothers. About $40 million in revenue bonds will be sold to help finance the Center.

- Citicorp has provided the Foundation a firm commitment to issue a letter of credit up to $64 million for the project that will be used to back the bonds.

WHAT'S IN A NAME?

Much time and research have gone into the development of the new Center, including the official name—Space Center Houston.

After reviewing a variety of name possibilities, the foundation discovered only one title came to symbolize the spirit of the new visitor center. Selecting the appropriate name, however, was based on marketing research and practicality.

Each word in the name Space Center Houston reflects a part of the foundation's mission—a visitor center that will educate America's youth about the history and future of manned space flight.

Space, particularly man's exploration of its frontiers, is the most significant aspect of both the name and the Center. It is essential because space immediately illustrates the theme of the visitor center—where man has explored and where he will travel again.

A name, however, does more than simply designate a person or thing; it establishes identity and offers description. "The word Center has more than one meaning. It is both a location and a source of ideas," said Vance Ablott, Project Manager at Walt Disney Imagineering. Houston was chosen to complete the three word title since it reveals the city's key role in space exploration and gives the location of the facility.

As the communication center for all space missions, Houston directs information from the human mind through a computer to other human minds.

Together, the words Space Center Houston symbolize a vast new frontier—the creative mind of American youths. "We wanted something that was serious and dignified but exciting as well," said Ablott. Space Center Houston reflects man's determination to realize a dream and to discover even more.

FOUNDATION PRESENTATIONS

| Leadership Clear Lake, Clear Lake Chamber of Commerce | March 10 |
| Society for Marketing Professional Services | March 17 |
| Galveston County Tourist Board | April 12 |
| Partners in Space Symposium | April 29 |
| Briefing to Governor Clements | May 4 |
| Pasadena Rotary Club | May 6 |
| Texas Commission on Space Science | May 20 |
| Houston Association of General Contractors | May 26 |
| Bay Area Builders Association | June 8 |
| River Oaks Breakfast Club | June 14 |
| North Galveston County Chamber of Commerce | June 21 |
| Spaceweek Panel | July 18 |
| Omniplan National Management Association Meeting | July 19 |
| Unisys National Management Association | July 26 |
| Clear Lake Realtors Organization | July 27 |
| Galveston Attractions Association | August 11 |
| CCISD New Teachers Luncheon | August 24 |
| Space City Rotary Club | August 29 |
| Baybrook Mall Merchants | September 13 |
| Lockheed National Management Association | September 22 |
| Whitehall Breakfast Club, River Oaks Country Club | October 21 |
FINANCING THE PROJECT

Space Center Houston will become one of the most important economic assets in our community, attracting millions of tourism dollars. The foundation's goal is to provide the very highest quality "experience" for each visitor yet keeping the admission costs low in order to make the Center accessible to as many visitors as possible.

Almost $1 million in loans from community sources paid for the conceptual design phase of Space Center Houston. But now that architectural design and construction are on the horizon, about $50 million more will be needed in the form of grants, corporate sponsorships and a revenue bond issue.

The contributed capital, in the amount of $10 million to $20 million, is being sought from foundations, individuals and corporations. As a non-profit entity, the foundation can accept tax-deductible donations for the construction of the facility.

The debt, at around $40 million, will take the form of revenue bonds which will be retired through admission charges and food and beverage sales once the facility is open. Citicorp has made a firm commitment to issue a letter of credit up to $64 million to support the revenue bonds. Once the construction contract is executed, in early 1989, the bonds can be issued.

The greater the success of the Center in raising contributed capital, the fewer bonds will need to be sold, thereby lowering future interest costs. This will ensure the Center's ability to charge the lowest possible admission fee. "We want Space Center Houston to provide an intellectual, emotional and sensorial experience for visitors," says John Walsh, Chairman of the fundraising committee. "Those who donate funds to build this facility are making an investment in the future of the space program."

For more information on how to make contributions, write John Walsh at MSFEFI, P.O. Box 580653, Houston, Texas, 77258-0653.

BOARD MEMBERS, OFFICERS RE-ELECTED

At the annual meeting of the Board of Directors on July 20, board members Grady McCright, Charles Bolden, Joe Bailey and Christopher Kraft were unanimously re-elected to the Manned Space Flight Education Foundation. Additionally, officers Harold Stall, Charles Biggs, Nancy Robertson and Norma Kersman were reinstated.

In other business, the board reviewed the findings of a traffic study prepared by Barton-Ashman Associates of Dallas. The report evaluates the impact of the visitor center traffic on existing traffic volumes at potential JSC entry points. The Board will use the study to determine preferred access point to JSC during the proposed road construction of NASA Road 1.

COUNTDOWN published by the Manned Space Flight Education Foundation, Inc.
P. O. Box 580653
Houston, Texas 77258-0653

DO NOT DELAY