



Alive!

Are you having a
Holiday Party?
Alive! wants to be there!
See page 20 for details.

SERVING OVER 17,000
CITY AND DWP EMPLOYEES

Vol. 4 ■ No. 11

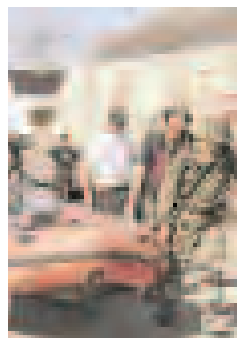
City Employees Club of Los Angeles | November 2005

Focus of *Alive!* Special Section: Katrina Heroes

■ Club paper devotes large section to City employees who served in Gulf States.

THE CITY — This month, *Alive!* devotes a special section to many of the City heroes who traveled to the Gulf States and saved lives and buildings, brought shelter and supplies, and performed other tasks.

"This is a historic moment," said John Hawkins, Club CEO and *Alive!* Managing Editor. "We want to make sure history remembers the names and faces of the heroes."



Read about the City heroes in the *Alive!* special section, beginning on page 27.

Katrina heroes are the focus of an *Alive!* Special Section.



The SKY'S the Limit

Refund Checks! Big Club Benefit Arrives in Dec.

■ The Club announces life insurance refunds of approx. \$800,000. Only those eligible will share in the bounty.

THE CLUB — Here come the refund checks ... right on time for your holiday needs!

The Club's Insurance Board of Directors has determined that for the year 2005, approximately \$800,000 is to be distributed back to the eligible Club members.

The Club continues its tradition of rewarding loyal members with a return of unused premiums (total premiums collected less paid claims and expenses). The 2005 refund will be the Club's 75th refund.



Brian the CFO

See Refund, Page 3

■ Massive renovation of Rec & Parks' famous Griffith Observatory brings together the best of the City. Facility director and legendary astronomer Dr. Ed Krupp gives *Alive!* a personal tour of the work in progress.

REC AND PARKS — Since graduating from UCLA with his doctorate degree, Ed Krupp has worked full-time at just one place: The Griffith Observatory. He started as a part-time lecturer, and is now the Observatory's director.

So there's no better person to lead the renovation of the world-famous observatory, which looks over the City basin and toward the sky.

The City-owned and -operated facility has been closed since 2002 to undergo a massive \$90 million renovation, the first in its history. Before it closed for its major nip-tuck, the Observatory was drawing some two million visitors a year. So, interest is high — and climbing — to see what Dr. Krupp and City hath wrought.

Judging from a private hardhat tour provided for *Alive!* by Dr. Krupp —and presented to you inside this issue—the restored

See Renovation, Page 50

Dr. Ed Krupp, Director of the Griffith Observatory, stands in front of the facility, which is undergoing a major renovation.

LOOK INSIDE
this issue of *Alive!* for the tour, interviews and tons of background information on the renovation of the Griffith Observatory:
PAGES 50-59



City Employees Club of Los Angeles
350 S. Figueroa St., Suite 700
Los Angeles, CA 90071

CHANGE SERVICE REQUESTED

PRSR STD
US POSTAGE
PAID
Permit #30391
Los Angeles, CA

Coming in December: **ClubFest 2005 Photo Gallery**
Remember the fun ... folks ... food ... and music with a special section featuring tons of great images from the biggest Club event all year.
Only in *Alive!*'s December issue.



Griffith Observatory Renovation

The Sky's the Limit

A City Icon, and Why It Matters

COVER STORY:

In October, Dr. Ed C. Krupp, director of the Griffith Observatory, sat down with Club CEO John Hawkins to talk about the major renovation of the City landmark, and then took John on a personal hardhat tour of the work-in-progress.

Alive! Thanks so much for welcoming Alive! and the City Employees Club. We're a totally positive newspaper.

Dr. Ed Krupp: Even if you weren't, it would be okay. We're public servants here.

Alive! Is it getting old with people asking you, "When is the Observatory going to open?"

Dr. Ed Krupp: We ask that question every day. No, it's not old at all. In fact, in a sense, it's terrific, but not surprising. Griffith Observatory is known and, it might be a little overly romantic to say so, but beloved by just about everybody. It's one of those few places that has no agenda other than we're owned by everybody. We're the people's observatory; people feel that way about it. So the fact that people want to know when it's going to open is actually terrific. It means that they're engaged: They know they own it, and they want it back. I don't blame 'em a bit.

Alive! When are you going to open, then?

Dr. Ed Krupp: I can tell you that last night at a Los Feliz Improvement Association meeting, the Councilmember said the Observatory will open when the Bureau of Engineering, the Department of Recreation and Parks, the Observatory, the neighborhood, and everybody says it is fully ready, and all of the things from a safety and completion [standpoint] have been done. He didn't speculate on any specific date. He said it might be mid-summer, or it might be late summer. It's going to open when it should. And so that decision will be made obviously by management.

Alive! Next year sometime?

Dr. Ed Krupp: Absolutely, absolutely.

Alive! One of the things we want to ask you is about the renovations, of course. What's different? Has it been two years?

Dr. Ed Krupp: No, no, even longer. We closed Jan. 6, 2002, and that was after many, many years of architectural preparation and all kinds of stuff. In a sense, this project is 25 years old in conception and development, but that's beside the point.

You asked about what's different. I want to preface that with a kind of a frame because it's an extremely important frame for this facility: Yup, it's different, except it's the same. And this goes right to the original master plan and the fundamental principles behind what we were doing. Everybody knows the Observatory. It's an icon of Los Angeles and it's known worldwide, largely thanks to Hollywood. That means that people have an emotional expectation about it, that it's this grand building.

They really did it right when they did it the first time. You don't wreck something that is actually superb and one of these real jewels for the City. So item number one is that this place, when it is finished, has to look the same, since it's seen from all over the City. When you make the pilgrimage and get up the road and you've done work to get there and you're rewarded by arriving there and you are greeted by this building, it must in fact look more or less the same not only for the sake of history and integrity of the building and all, but because it was the right thing in the first place. The people knew what they were doing. There was drama in this approach. There is satisfaction in this grand building that says, "This is the Observatory. This is the place where you make contact with the sky." It sends that message by its location and architecture. It is in fact on the best piece of public observatory real estate in the world. We're the envy of other places that do things like us.

Alive! Public observatory as opposed to ...

Dr. Ed Krupp: Private. Private observatories would have nothing to do with [our location], because they need to be much farther away, much higher, and, I'm speaking from the point of view of its steadiness, not its clarity, the steadiness of the air in Southern California is actually what drew astronomy to Southern California in the first place. Mount Wilson still has superb observing conditions and is still used because of that unique quality of the climate.

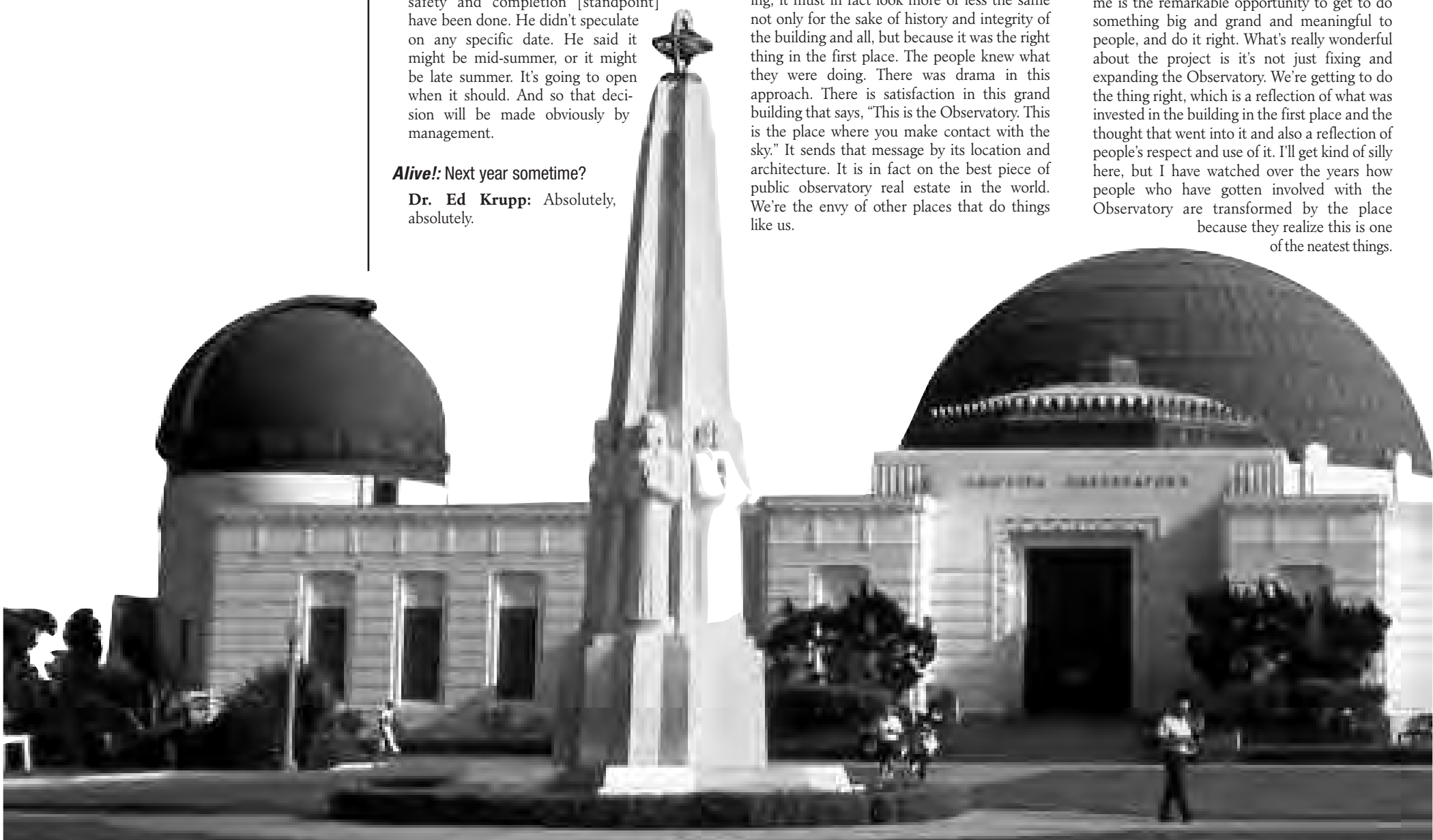
Bottom line is the place had to look the same.

And then when people get here, they are owed the same sense of vista and view. When we closed and I was asked what people would miss the most, I said, "The view, no question about it. They'll miss the view." And they have. They will return to the view because that is one of the most spectacular things about it. It is spectacular from the perspective of, "Here I am in Los Angeles; I'm looking out over the basin and I see everything;" but it's also in a sense educationally and scientifically spectacular as well because that view does exactly what we're supposed to do - make the connection between earth and sky. [It] becomes the launch pad for each individual spirit into the sky to make connection with stars, planets, galaxies, and so on. That's what it's about.

Doing It Right

Alive! What do the Observatory and its renovation mean to you personally?

Dr. Ed Krupp: The real personal message for me is the remarkable opportunity to get to do something big and grand and meaningful to people, and do it right. What's really wonderful about the project is it's not just fixing and expanding the Observatory. We're getting to do the thing right, which is a reflection of what was invested in the building in the first place and the thought that went into it and also a reflection of people's respect and use of it. I'll get kind of silly here, but I have watched over the years how people who have gotten involved with the Observatory are transformed by the place because they realize this is one of the neatest things.



Griffith Observatory Renovation

“We look at this place as an instrument because it’s filled with instruments and it operates to transform the visitor into an observer. That’s the mission, that’s our job. By becoming an observer, they become more tuned to nature and what makes nature tick.”

– Dr. Edwin C. Krupp, Griffith Observatory

The whole construction team, everybody who has gone up there has said, “This is a big deal. We’ve got to do this right.” There’s none of that sense of, “Oh, we can shortcut this.” Everybody’s trying to do their best effort, and they always have. That’s the pleasure for me – getting to do something right. Like that’s a miracle, you know?

Alive! But there is part of Dr. Krupp in this renovation, in this Observatory. You’re stamping this with a seal of approval for generations to come.

Dr. Ed Krupp: I appreciate that point, but remember I’m actually operating as – you could call it an enforcer, a mob guy or something. I’m really an enforcer of standards. And those standards come from of course the City of L.A. and what it intends by what it owns and the Department of Recreation and Parks, the astronomical community and the information that astronomy obtains and how it obtains it. There are standards in the integrity of that information and then there are standards of just visitor experience. And so, if I have a job, it’s being able to implement standards that I think everybody understands.

Alive! What’s your favorite part of the building?

Dr. Ed Krupp: It’s a fair question, and the answer changes as we do stuff. Sometimes it’s something very small and sometimes it’s something really very, very big. I can’t give you a fair answer to that. I could easily pick one and say, “Oh yeah, this is it” and be happy to talk about it, but in fact the place is like a three-ring circus with a whole lot more than three rings.

Maybe it’s better to say: Almost everything that we’re doing is unprecedented in the world in the way that we’re doing it. For example, [one new feature] is this 150-foot-long wall, 20 feet high, that will be the biggest astronomical photograph in the world. [You might say,] “Well, that’s neat,” except it’s a threshold to the world of the galaxies beyond the Milky Way. You are looking out into what’s essentially the big metropolis of galaxies outside us in the sticks. We’re way out in the suburbs of this local amalgamation of galaxies, and most people have no clue where we are. This understanding of where we are, just geography, is a product of just the last century and it’s just begin-

ning to filter into the average person’s mind. This is how this fits in. This scene is in fact a way of giving this instant visceral experience to people; but at the same time, it’s got a much more profound message.

Albert Einstein is [represented] on the floor in the room where this is located, the [Richard and Lois] Gunther Depths of Space. He’s there, not only because Einstein’s cool and it will be a bronze statue of him and you get to sit next to him and have your picture taken with him and all that, but Albert is sitting down there with his hand up in the air. The amount of sky that he covers up with his finger is the same amount of sky that this 150-foot-long, 20-foot-high wall is showing you. We’ve taken that finger’s worth of sky, blown it up big, and shown you what’s covered up by his finger. It’s astounding because it’s galaxies and more galaxies. You have no idea how much stuff is out there. This is the first chance to give people a sense. There’s this much stuff. It’s incredible.

It really took a variety of conceptualizations to get to this point, but it also goes very far back to when I was in graduate school, when I was looking at prints off of the 48-inch Schmidt telescope up on Palomar. I was looking for galaxies and mapping them, and I had a little magnifier. [Back in graduate school,] I had a picture on my desk, and I traced and made all these maps and counted things. I did this day in and day out, trying to get out of graduate school. You’re looking in there and you see a galaxy. It’s like a spiral galaxy. You can see this tiny little thing, and it’s got tiny little spiral arms you can hardly see. And you’re saying, well, that little sucker is about as big as the Milky Way that we live in. And then there’s another one, there’s another one, and there’s another one, and there’s another one. All I could think of was, man, there’s a lot of Fords and refrigerators and stuff out there. It’s astonishing how huge the universe is. Just to begin to give a sense of that to people is a treat.

Alive! Is it a Hubble photograph?

Dr. Ed Krupp: No, it’s actually off of Palomar Mountain. Hubble couldn’t take that photograph. The Hubble covers an extremely small amount of sky, much smaller than a finger’s worth, and you



Dr. Ed Krupp in front of the Griffith Observatory under renovation.

couldn’t blow it up that big without it looking really ugly. You just can’t get the resolution. This was a scan done for us with a telescope called the Samuel Oschin telescope on Palomar Mountain. It’s been refurbished digitally, electronically. They did a scan of the region that we want for us to the sufficient level of detail that we’re enabling us to blow this thing up that way.

Why People Look Up

Alive! Why is astronomy important?

Dr. Ed Krupp: It’s actually pretty simple, but I have a feeling that most people don’t necessarily make the connection. People think about astronomy like it’s cool and it’s interesting. It’s much more important than that.

It is a tool for our survival, not that other things aren’t too, but you sort of think of it as very lofty and remote and not having much to do with our everyday lives. But astronomy is obviously the sky, and the sky, the universe is what prompts the biggest questions that we ask, and those big questions then inspire curiosity. Who we are as organisms on the planet gets translated into attempts to understand nature more accurately. We seek more accurate descriptions of nature because of these big questions that prompt the curiosity. Accurate descriptions of nature we know from experience are tools for survival. It’s

just altering the perspective to be able to take in who we are and how we fit into the landscape we inhabit.

A simple case in mind, and this isn’t even the one that normally affects me the most, but we saw the world transformed in 1969 and thereabouts when the first footprint was put on the moon. And everybody said, “Oh, that’s cool,” and all of that, but the fact is, it wasn’t just that it was an achievement that people acknowledged, it changed the way they looked at themselves and what they thought they could do and how they could do it. That footprint on that moon, that blue earth in space, became a new place. We wouldn’t be talking about the kinds of things that relate to the place where we live and the environment if we didn’t have a conception of it, and we couldn’t have had that conception if we hadn’t gone out and looked back at it. Astronomy just extends that kind of mentality to these very large scales and it ultimately always comes back to who are we, where are we going, where have we come from, and what’s the right thing to do.

Let’s put it this way: Astronomy prompts the big questions. Big questions invite wonder.

— continued next page



(Left) Griffith Observatory, prior to renovation. (Above) The front lawn of the Griffith Observatory was temporarily dug up to construct a major expansion underground. The lawn has since been restored.

Griffith Observatory Renovation



The front lawn of the Griffith Observatory was dug up temporarily to construct a major expansion underground. The lawn has since been restored. The beginning of the Leonard Nimoy Event Horizon Theater can be seen.

Renovation

Continued from Page 1

Club Gets Peak at Project

Griffith Observatory is going to be a stunner: more spacious digs, modernized exhibits, better guest facilities and a planetarium that's so state of the art, nothing like it has ever been built.

The project is scheduled to open sometime next year, probably mid-year or after. Funding for the project is coming from a number of sources, including the City, the state of California, the federal government, benefactors, visitors and, substantially, the Friends of the Observatory nonprofit association.

The renovation includes a 35,000-square-foot expansion, largely an entirely new wing and second theater built under the Observatory's front lawn. The terrace will still have plenty of room for leisurely visits; the expansion will be interrupted only for new elevator towers on the side. Also being prepared are five new exhibition halls, the 200-seat Leonard Nimoy Event Horizon Theater, and an education center.

Highlight for many visitors will be the completely modernized Samuel Oschin Planetarium theater, equipped with machinery and seats to create a startling moving likeness of the star field above Los Angeles (or above anywhere, at any time through recorded history). The illusion of looking at an open sky has never been created to this extent.

A restaurant and a shop will provide an enhanced customer experience. Every historic architectural detail is being restored to its original form and, for the first time, the Observatory's rooftop terrace will be accessible to the disabled.

Enjoy your hardhat tour, courtesy Rec and Parks, Jon Kirk Mukri, Dr. Ed Krupp, Bureau of Engineering Project Manager Larry Gonsalves, and Alive! ■

City Icon, continued

Wonder drives the quest for understanding. The quest for understanding invests value in accurate portrayals of nature. Accurate portrayals of nature enhance survival. I am a big fan of survival, and astronomy is a tool for survival.

Alive! What is archaeoastronomy? That word comes up a lot in your books.

Dr. Ed Krupp: That's a word with too many vowels. Archaeoastronomy is a coined term for an area of inquiry that developed rapidly over the last 30 years. It existed before then, where people would look at ancient monuments primarily and say, "Hey, this lines up astronomically. Who knew they lined this up astronomically? I wonder why they did that." And it was relatively unsophisticated inquiry at the start.

Archaeoastronomy is a more disciplined examination of the relationship between culture and the sky, how people have looked at the sky and used the sky – everything from measuring it through serious observation and record-keeping and then using that astronomical knowledge, whether it's for social structure or religious conceptions or art or whatever. We put the sky into everything.

Alive! More so in the past than today?

Dr. Ed Krupp: No, I think it's just different. If you think about it for a second, it's very easy to just look around our environment and see references to the sky, whether they're in the names of automobiles, popular songs or cereal. And we say, "Well, that's kind of stupid." In the old days, they were serious about it. You know, they had gods and stuff. And I don't think it's so different. It's a preoccupation that our imaginations have with the things around us. We take what's around us and we incorporate that into our experience and then make something out of it. Two thousand years ago, nobody would actually produce movies about aliens landing on the earth. That's our story. That's our fable. We wouldn't tell that story if it weren't meaningful to us.

It suggests a different viewpoint about the earth and sky than our ancestors had, but I think we're still very preoccupied with it. The only reason the Los Angeles Times puts a Hubble telescope picture on the front page is because people will respond to it. And people do respond to it. I don't know why it's so. I only know it is so. We have a profound sense of that relationship still.

The Best of the City

Alive! Tell us about all the City departments represented up on the hill there.

Dr. Ed Krupp: I probably won't be able to do a complete job of it, but clearly the Department of Recreation and Parks owns and operates the Observatory, and I work for Recreation and Parks. But the Bureau of Engineering in Public Works is managing the project and doing an absolutely spectacular job of it. I shudder to think how it would be if they weren't involved with it.

Alive! Contract Administration as well?

Dr. Ed Krupp: Yeah. And then obviously Department of Water and Power has a role to play because they're bringing water and power to the place.

Alive! Building and Safety?

Dr. Ed Krupp: Of course. With Building and Safety, it's a whole different issue because you have to get through Building and Safety. I wouldn't call it an adversarial relationship. We clearly recognized each other's value.

And General Services, for gosh sake. Just purchasing alone – stuff you have to buy, you have to bring on board ... The Personnel Department ... It might seem routine. It's not routine. We've got a whole bunch of new classifications of positions that never existed before that have to somehow be brought into the City system. This is a hard thing for the average person to understand, but it all comes down to, "What are you dealing with?" You're dealing with public money. And there's a way that that happens, at least in Los Angeles, and sometimes it mystifies people outside of it. You have all of these things that you have to go through to acquire stuff, to acquire people, and I couldn't do that alone. The Department of Recreation and Parks has support elements obviously for parts of those, but they again need [other City departments]. And we do not want to forget the Fire Department. We will never get in that building without the Fire Department, I guarantee it. And when we open, D.O.T., the Police Department, I mean you start naming them ...

Alive! Is Cultural Affairs involved?

Dr. Ed Krupp: Cultural Affairs has a role because they own the artwork at Griffith Observatory, the murals and the astronomer's monument. They had to review the plans for restoration and approve those plans. And we had to go before the Board of the Cultural Affairs Department with the entire plan in the first place because part of their charter was recognizing and preserving the artistic and cultural heritage of the City and, in particular, Griffith Observatory. And if that is their charter then we have a responsibility to fulfill that with this project. We presented, and passed with flying colors, I might add.

The handicapped access is just another example

of those things. We have legislation that requires us to fulfill certain obligations to make the place available to everybody, and that meant that we had to go to each of those agencies, bureaus, or departments in each case, both to be assured that we were doing the right thing or to get guidance if we weren't. Oh, the C.A.O., and the C.L.A., too.

Alive! Any council people showing an interest?

Dr. Ed Krupp: Oh yeah.

Alive! Anyone in particular?

Dr. Ed Krupp: This is in Councilmember Tom LaBonge's district, and he has been a hero from the beginning, decades before he was a Councilmember. For the times that I've appeared before Council or had just individual action, you find everybody sees this is belonging to the whole City, of course.

Alive! How many City employees will be working for you?

Dr. Ed Krupp: When we are finished, the full-time staff will number 30, approximately. The part-time staff will probably have a roster of between 150 and 200, and they are the real on-the-ground operations people. There will be some full-time operations people, but the people that are the guides, the ticket sellers, you know, the planetarium lecturers, all those people are most likely to be part-time.

Alive! So it's really the best of the City coming together.

Dr. Ed Krupp: It goes beyond the City, though and I think that's the other important thing. Your message for City employees is absolutely correct, but I think it's extremely important to realize that this is a genuine public/private partnership with Friends of the Observatory, an independent community support group. They stepped up to the plate to assist in fundraising. They have done extremely well. They act as stakeholders; they also act as people who help to preserve interests of constituencies, the public, and so on. And so getting that to work – and work in a new way – is actually going to be one of the great stories told about this. You can actually make that happen.

And then you can even carry that beyond [the City] because there is Federal money in this project, which required Congressional Representatives and Senators to get on board. There is State money in this project, both in outright grants as well as competitive grants. There is obviously local tax-base money from the County as well as City sources, where the taxpayers voted and said, "Yes, we want money to go to that," and it did go to that and that's being spent. So it's an extraordinary mix.

I think it is actually a real reflection of the entire community in a way, and that is one of the things that I think is not so well understood except by the person who says, "Yeah, I own it. I own the place." They kind of know it viscerally, whether they know these details or not. ■



Dr. Ed Krupp pretends to be Atlas in "holding up" the old support beams during the excavation of the new Observatory space, under the building's front lawn. New support beams were put in to accommodate the expansion.

Griffith Observatory Renovation

His Moon Vehicle

Alive! Tell me about your car, a 1968 Chevy Camaro.

Dr. Ed Krupp: The car's got 411,000 miles on it now. That means that it has been to the moon, which is 240,000 miles from the earth. And now it's on the way back from the moon. My goal is to get it back to earth safely.

Alive! To do a safe splashdown.

Dr. Ed Krupp: Yeah, that's right.

Alive! It looks like a late '60s color.

Dr. Ed Krupp: Yeah. Triple deep turquoise.

Alive! Did you buy it new?

Dr. Ed Krupp: Yeah. This was my mush mobile, and I had no idea that it would last.

Alive! It did, though.

Dr. Ed Krupp: It did.

Alive! That's great.

Dr. Ed Krupp: People mock me of course, you know. It's a '68.



Is There Other Life Out There?

Alive! The question I really wanted to ask is whether there's life on other planets.

Dr. Ed Krupp: I don't mind answering that, but I'll throw it back at you. That question is, "Do you believe?" And for an astronomer, that verb [believe] is actually the one that you try to avoid, because what I believe makes absolutely no difference.

What you want is to know. Can we know if there is life outside the earth or not? The answer is right now there is no evidence to tell us the answer, one way or the other. And so, for me, what's actually important is not so much the answer to that question, which won't be very satisfying for people, but [instead] knowing if this is a universe that is filled with life all over the place, or it's a universe in which we're it.

It's an extremely strange and interesting universe, and that prompts in either case extraordinary questions. Why is it like that?

I don't know if there's life out there. I think it's very easy to argue that there is, and I think it's very easy to argue that there isn't. I'm not as interested in arguing as knowing.

Alive! Right, finding that out, life as we know it.

Dr. Ed Krupp: Or even the difference between intelligent life and just, you know, single cell [organisms]. ■



Dr. Ed Krupp (left) and Club CEO John Hawkins ponder life on other planets.



ABOUT Edwin C. Krupp, Ph.D.

Birthplace:	Chicago, Ill.
Education:	Bachelor's degree, Pomona College; Master's and Doctoral degrees, UCLA.
Children:	One son and four grandchildren.
Siblings:	Two brothers, twins.
Title:	Observatory Director
First job with the City:	A part-time job as a planetarium lecturer from 1970 to '72. First full-time job was as curator for Griffith Observatory in 1972.
Favorite movie:	The Wizard of Oz ("easily").
Favorite kind of music:	"Bob Dylan, no question."
Favorite Friday night activity:	"I have no life."
Can you dance?	"No."
Favorite candy:	"There are three basic food groups; chili, chocolate and beer. And chocolate of course is at the top. We're talking dark chocolate, not simply 72 percent cacao, or 80 percent. Have you ever had 99 percent? It's like eating dirt. It's great."
Hero:	"My father and George Abell are probably two real good ones. George was my adviser in grad school. He wrote the first modern textbook on astronomy and was a great showman. Everything that I ever learned – well, almost everything – I learned about what I would call astronomy entertainment I saw George do in front of a classroom on a chalkboard."
Best advice ever received:	"Less wordy."
Favorite quote or saying:	"I Don't Call It Anything" —Bob Dylan.
Hobbies:	"I listen to music, all music, but am most transported by Bob Dylan, all Dylan. I am always grateful to hear live music, especially at small venues. I do read a lot and not just astronomy but also classic literature, comic books, archaeology, anthropology, mythology, and genre literature (ghost stories, horror, terror, science fiction, mysteries, and the rest). I collect a lot of stuff, including bits of popular culture that few regard as collectable. "[But] most of my interests have to do with astronomy, and I consider myself extremely lucky to get to do astronomical things all of the time. So, I write astronomy (I have been contributing a monthly article on astronomy and culture for Sky & Telescope magazine since September 1993, and the enterprise is dedicated to the notion that astronomy is everywhere. I read astronomy. I travel astronomy. I talk astronomy."
Favorite archeological site?:	"The next place I haven't been."
Person most like to interview:	Ancient astronomer Hipparchus. "He was professional, trailblazing, and on the mark, but almost all we know about him is secondhand."
Books authored (partial list):	Skywatchers, Shamans and Kings: Astronomy and the Archaeology of Power (1999) Beyond the Blue Horizon: Myths and Legends of the Sun, Moon, Stars and Planets (1991) Echoes of the Ancient Skies: The Astronomy of Lost Civilizations (1983) The Big Dipper and You (1999) The Moon and You (1993)



Griffith Observatory Renovation

>>>> Touring the Observatory <<<<<

STOP 1 The Front Lawn

Alive! A lot of changes to the building aren't going to be seen.

Dr. Ed Krupp: People will have never a clue about the elaborate engineering that went into this to make the underground expansion happen. Even more amazing than that is the mechanical plant that's on the side because that slope is much spookier than this level ground underneath the building, and they had to build the platform out for that, and they successfully did it.

We brought the food concession into the building and very deliberately dedicated valuable floor space [for it] to have the café operate at an appropriate standard. There will be a small, outdoor restroom to the north of here. The work is going on. The Bureau of Engineering Architecture Division is working on those plans right now.



Alive! You have a 360-degree view from here.

Dr. Ed Krupp: Yeah. That's probably why they call it an Observatory.

There are three major things to think about with this facility. First, it's an observatory, a public observatory, so you got telescopes. Number two, you have the planetarium, the real driver for the project originally. And then number three, essentially the rest of the building, primarily exhibits. And then you have the whole outdoors.

STOP 3 Plaza Elevators

Dr. Ed Krupp: This is one of the new elevators. The place never had elevators and now it is completely permeable in access. This is the exterior elevator that takes people from this level all the way down into the Gunther Depths of Space. And it had to have some character to it that looked like it belonged with the rest of the building.

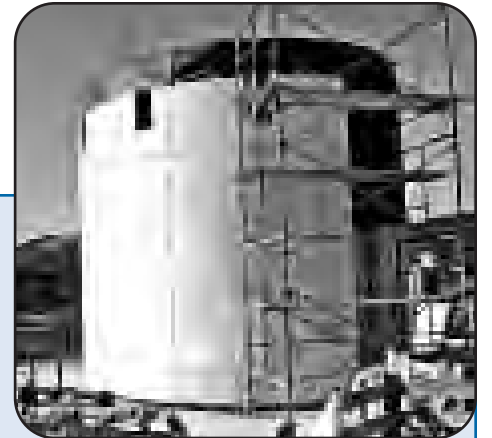
Alive! And it does.

Dr. Ed Krupp: Oh, it's gorgeous.

Alive! Is it gonna have a little round dome-y decoration?

Dr. Ed Krupp: No little round dome-y on it.

Larry Gonsalves: We're actually standing



over the new expansion right now. But it's underground, so you don't see it. They're starting to put the sidewalks back and the grass lawn just the way it was before. This elevator penthouse for access is a big exception [to the previous lawn]. This is all going to be a plaza over the new expansion.

Alive! It was grass, right?

Dr. Ed Krupp: There will still be grass in these open areas. And now that these terraces will be formally prepared, they're absolutely prime real estate because people would always gather out here, particularly for sunsets and all. Now it's actually much more pleasant, much more easy, and can accommodate people in a much more civilized fashion.



STOP 2 Rebel Without a Cause

Dr. Ed Krupp: This is the Rebel Without a Cause monument, reinstalled. There are actually two reasons for it to be here. One, the

Observatory in fact has a Hollywood connection and we overlook Hollywood. The only difference is here the stars are the stars. We have been in so many motion pictures that we should have a star on the Boulevard and in fact that's where I'm headed. I think we need to get one for the Observatory. But this was the first film. Of all of the films that the Observatory appeared in, this is the first one that portrayed the Observatory as the Observatory.



STOP 4 West Terrace

Dr. Ed Krupp: This is a new feature. It's actually a monumental instrument incorporated into the architecture called the Transit Quarter. You can see a line going out that way. And there are several of these. These lines are gonna be inlaid stone that three of them mark the solstice positions, the extreme positions of

the sunset in the equinox; the other four mark the moon's extreme positions as it changes over an 18.6 year cycle.

It turns out that, right now and over the next several months, we are at the point where the moon is as far out to the sides as it ever gets. What I'm doing right now is checking these alignments with the real moon. We did all the measuring. A Bureau of Engineering survey team came out here and helped put the lines in.

Griffith Observatory Renovation



STOP 5

West Hall/ West Rotunda

Dr. Ed Krupp: This was and still is the West Hall and West Rotunda. It is still the place where the solar telescope, or coelostat, is. That's what that cylinder is. It harbored a wide solar telescope that brought a live image of the sun whenever the sun was out with two other instruments on the side that had beams of

light falling on them that allowed you to see the sun and the special red light, or the spectrum, of the sun.

This is still part of what makes the place an observatory. It is in fact a telescope that operates daily for the public. More people have seen the face of the sun directly like that here at Griffith Observatory than any other place on the planet. More people have looked through the Zeiss telescope on the other dome than any telescope in the world. This area here will also be dedicated to the notion of our sun as a star. It's sort of a cliché, but actually a lot of people don't really register that the sun is just another star. So we talk about stars, about elements, and all the things that make up stars and where they come from.

STOP 6

Hall of the Sky

Dr. Ed Krupp: This moves us into the old historic alcoves on this side. This is the Hall of the Sky. There are six different exhibits here that fundamentally show people the most basic things that people see in the sky and yet don't necessarily have an understanding about. With models and other demonstrations, [the Hall will show] phases of the moon, night and day, the seasons, eclipses [and] tides. All of these are incorporated here, one for each of the alcoves. So if people walk in, look overhead or what's at the back and all of the scenes should be different things.

Alive! Where is the Tesla Coil?

Dr. Ed Krupp: It's in storage now in crates, but it will come back. It's one of the exhibits that will return and it's going down to an alcove. I would be run out of this City on a rail if the Tesla Coil didn't come back.

Alive! Does the Tesla Coil really belong in an Observatory?

Dr. Ed Krupp: Absolutely not. The greatest conundrum of all the things we did was the Tesla Coil. How do we bring the Tesla Coil into an astronomical story? And the answer was, there's no good answer. In going through this with the designers and the renovation steering committee back then, the question would keep coming up. People would say it has no place. And I'd say that doesn't matter. I will not be able to continue working in Los Angeles if it doesn't come back. So it's gonna come back. It's a crowd pleaser.

Alive! Wasn't Tesla trying to take energy to the moon?

Dr. Ed Krupp: It was a way of conducting or transmitting energy. He [Tesla] pioneered AC, alternating current, but his notion of having this transmitted through electromagnetic waves through the air of course would have played ... I mean, nobody would have cell phones today. He didn't win out on that part. He was a wild and crazy guy.



And here, this is the Foucault Pendulum. Remember, you walk in and the thing is swinging back and forth? This is in fact the best architecturally integrated Foucault Pendulum in the world. I know 'cause I've gone and looked at 'em all. This is even better than Foucault's Foucault Pendulum. We did restoration work with the glass and the metal and the travertine stone inside.

People walk in and they look at it and they wonder what it is. A great movie would be filming people explaining to their kids what they think this is doing. But it demonstrates the rotation of the earth and so it's an instrument. That's a fundamental principle again of this place as well as the job we're doing. We look at this place as an instrument because it's filled with instruments and it operates to transform the visitor into an observer. That's the mission, that's our job. By becoming an observer, they become more tuned to nature and what makes nature tick.

Alive! Wasn't the gift shop right here?

Dr. Ed Krupp: It was actually an alcove over. This was the entrance to the old office area through here.

Larry Gonsalves: We opened up the walls here for the information and ticket sales. They used to be small little openings.

Dr. Ed Krupp: The alcove that used to be for ticket sales now will become an alcove dedicated just to Colonel Griffith and who he was. The portrait goes back. The City Council proclamation for Griffith Park goes back there, plus some background on Colonel Griffith.

STOP 7

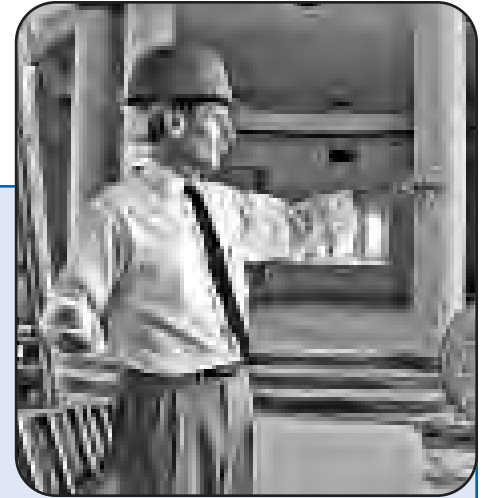
Hall of the Eye/ Keck Central Rotunda

Dr. Ed Krupp: This area now becomes the Hall of the Eye. Once you start going through the Observatory, this is a starting point because this explains and demonstrates and shows how people extract information from the sky – what is it you get with your eyeball, and then where does that lead. And so the first zone you go to is people using the sky in a bunch of theatrical little demonstrations. We have animated little guys coming in and doing stuff where they don't have telescopes.

Then the next thing we do is extend the eye in an area here with a telescope. What does a telescope do? Why do we care? How does it work?

Then you go to observing in California. The story about how California became the Alexandria of modern astronomy is not well known. This is a California story. So we pitched that story to the State Department of Parks and Recreation and they gave us a major grant for this exhibit. So we go through on that side really telling the whole story of California astronomy from the first observatories, the big observatory at Palomar, and now how the tentacles of California astronomy reach up into orbit and out throughout the world. Another story that people take for granted is this whole business of having a public observatory. It was innovative here in 1935. There were pioneering people, and Griffith was among 'em. He left the money for this. As a result, years later, decades later, we all assume it's part of the landscape, but it's a story that is really unique to Los Angeles.

The terraces are really important; [previously] they didn't exist at all. And now we have a terrace on the east side to complement the west side. Telescopes can be set up there.



Alive! The terraces could be for special events.

Dr. Ed Krupp: Absolutely. Yeah. This is just a wonderful addition of real estate. Many people just take it for granted, but I'll [bet] you people are gonna love these open spaces adjacent to the building.

Alive! A special events place.

Dr. Ed Krupp: Oh, yeah. — [One] wall [in this hall] is dedicated to "observing the invisible." [Telescopes are going in there.] We'll be looking at light that our eyes can't see, and that's what this whole side of the room is.

In the Central Rotunda, they've restored all of the paintings. There's nothing in the world like these murals. Up above is sort of the mythological conceptions of the sky, and then around are sort of the eight sciences: eight panels of eight sciences and technology.

So this parable that the building's architecture is telling us is that our imaginations begin with projecting these myths on the sky. They become the science and technology, which in turn become this public observatory, where astronomy is available to everybody. It's an amazing conception they had in the 1930s.

Alive! And above here is the dome, the main dome.

Dr. Ed Krupp: Above here is the cupola. The main dome is over there. There's another mural here, but it's not a figurative mural. It's more like a decorative mural. So this is the old and traditional main entrance to the planetarium theater. And that's what we're going in now.

STOP 8

The Center of Gravity — The Wormhole

Dr. Ed Krupp: Down here, you come down Gravity Stairwell to the Center of Gravity. Over there is the entrance to the wormhole.

Alive! You're scaring me, Doctor. What's the wormhole?

Dr. Ed Krupp: There are two routes to the Gunther Depths of Space and the Leonard Nimoy Event Horizon Theater. There's the long way, which is the Cosmic Connection, and a short way: If you'd go through space/time relativistically, you'd take

a wormhole. So this is the wormhole. You need the shortcut to go straight down here.

Alive! Will I go back like 30 years in time if I walk through here?

Dr. Ed Krupp: You could.



Griffith Observatory Renovation

Tour, continued

STOP 10

The Samuel Oschin Planetarium

Alive!: Do you still have a piece of the Laserium show here?

Dr. Ed Krupp: I was there for the whole history of Laserium, and it did many valuable things in the long run for showcasing the Observatory and expanding it back in that era to a wider audience. But a Laserium program won't be coming back.

Alive!: I loved that in high school, though.

Dr. Ed Krupp: I understand.

Alive!: I hear the Zeiss thing is gone, too.

Dr. Ed Krupp: The old Zeiss, the Zeiss Mark IV, which went in in 1964 and was smoking and sparking when it came out – you couldn't get parts for it, Zeiss wouldn't handle it – that will go on display downstairs in the Depths of Space, not as an example of old planetarium technology, but of how we make a model of the universe. The new Zeiss of course is in the new theater and absolutely superb.

Alive!: I never understood. I used to come up here and see the Laserium show, and then one day I realized, "Wait a minute. Why are we here?" It's just a laser show.

Dr. Ed Krupp: Yeah. That's right.

Alive!: Why was it here?

Dr. Ed Krupp: 'Cause you need a dome. They needed a dome and this was the biggest dome they found.

Here's a little bit of orientation for the planetarium theater. This of course is a room that's familiar to most people, a place where the stars come out and fill the dome. Even 25 years ago, we knew we had to do something about this room because equipment was wearing out. Everything was wearing out. The last major renovation it had was in 1964.

The idea is to transform this into the most technologically advanced planetarium theater in the world. And in fact we're exceeding the expectation on several different levels. The first thing is not visible. It's the Zeiss projector you'll see when we go downstairs, but that is the state-of-the-art fiber optic Universarium projector of stars and planets from Zeiss in Germany.

We were not fully satisfied with the star field and we did due diligence, going around to everybody that made planetaria. We liked Zeiss, but we said, you know, it's not quite as realistic for the faint stars as it needs to be. They were resistant. As the deal started rolling and they realized we were serious, and they said, "Okay. We will work on this change." And they did.

I can tell you because I've seen it, this theater, when it operates, will produce the most accurate, the most awe-inspiring, the most gorgeous dome full of stars in the world. The theater itself with the dome and sidings and the seats and everything is one of two planetarium theaters in the world that actually has architecture as an interior. The other one is in New York, and they get high marks for pioneering that sensibility. Our sensibility is totally different from theirs in conception. But the intent here is, when people come in, to have their jaws drop by a dome that seems an infinite distance away. Fortunately, this dome technology appeared just when we needed it, and it's doing exactly what we need it to do.

The third primary element of the theater is all of the other special visual effects. Those in the old days were done with slide projectors and motion picture, and then video came in and all of that. It was all kind of hokey and hard to



control a hundred or more projectors. [Then] they started bringing giant Barco TV cameras, but the trouble with those is that, while they could combine a big image onto the screen, they weren't sharp, they weren't rich in color, and they weren't very satisfying.

In the period of time that we've been involved in it, laser video technology has begun to come online. What you get is brighter than any images that could ever be put on a dome this size, and sharper than any images ever put on a dome this size. When this is up and operating, it will be unprecedented on the planet. This will be the best planetarium theater in the world.

Alive!: This laser video technology, is that separate from the Zeiss?

Dr. Ed Krupp: It's separate from the Zeiss.

Alive!: This is more about color graphics?

Dr. Ed Krupp: It projects all the dome's digital animation. The other thing that remains completely unique to Griffith Observatory, and has been throughout its whole history, is that the presentation in here has been given by a live human being. A real person talks to people and does the presentation. They're canned shows just about everywhere else. And our sense is, like the rest of the place, this is an experience. It isn't like doing this at home on television. When you come here, it's much more like the theater and it needs to be of the moment, so we have preserved that tradition.

It's hard. We've got to train a whole new group of people in how to use this theater. And frankly, we're only beginning to learn what we've got to do. This is the stuff we're just beginning to choreograph now.

Alive!: So the mesh covering the inside of the dome causes it to look like there is nothing.

Dr. Ed Krupp: It's a perforated aluminum dome, which they make out of perforated aluminum because that's the material that allows the dome construction. But what you want is something that's seamless. There's a way of constructing and assembling this where they are able to make the seams disappear in combination with correct lighting, so that you just see this smooth surface. If you go to planetarium domes all over the place, you'll see these lines. We want people to come in here and imagine it blue; there may be some clouds floating across. It's the cathedral effect.

Alive!: And it will be shown on the entire dome?

Dr. Ed Krupp: On the entire dome.

Alive!: And it won't look distorted?

Dr. Ed Krupp: Yeah. The planetarium projector does it just fine. It operates from the center of the room and projects the stars out and everything, no distortion. All dome digital animation is very tricky to do and make it look right. Not only is it projected out, but you've got stuff moving. We're creating environments

skeletal versions of them and then you fill them out a little bit more and then you do the final rendering for the realistic sense that this is exactly what it looks like. And so we've got rooms full of computers and animators, and all they do is they stare at screens all day and do this.

Alive!: And you said the dome is aluminum?

Larry Gonsalves: It's a half sphere. It's got aluminum ribs so it's self-supporting on the perimeter only. The annular space between the ceiling of this projection dome and the roof structure is about 18 feet. So there's a series of catwalks up there to get access to speakers, air conditioning ducts, and all that that you don't even see.

Alive!: Fascinating.

Dr. Ed Krupp: Remember, this has to be a perfect hemisphere and it has to be level and it has to be properly lined up and there's a zillion places to make a mistake. Everything behind the mesh had to go black and non-reflective. They had to come up with the best non-reflective black surfacing that you could. Otherwise, you get reflections of things like the sun's disk back through and you get a doubling of the image. We've tested it already. This is again the best I have seen anywhere. You don't get that ghosting of the image because of the work that these guys did in improving what happens behind there.

in here: You're in Ptolemy's headquarters in Alexandria as he's looking out at the night sky. You're in the middle of the Big Bang of the universe and you're swinging by the Milky Way galaxy. There are actually animation problems being solved that exceed the demands of any other digital composition medium at the moment. Everybody else is on flat screen. And the other places that do this, like Hayden/Rose in New York did not go to the level that we are going in terms of the multiple camera views that bring the image together without distortion.

Alive!: So it will be solved.

Dr. Ed Krupp: We're solving it already. Most of those problems have already been solved. Where we're going now is we're moving toward the final rendering of all of these images. You sort of create in a sense

STOP 9

The Projector Pit Room

Alive!: Dr. Krupp, do all the planetariums rise from the ground?

Dr. Ed Krupp: No, no. The idea of emerging from below actually did originate in the 1970s; when America and Canada entered a new phase of planetarium design, there were a number of facilities that recognized the value of being able to get the instrument out of the way and so they did that. But most of those instruments were considerably smaller than what we've got in this era. So this is like a monster.

Alive!: Does it have to rise from the ground?

Dr. Ed Krupp: It doesn't have to. No, you could just put it into the room, but the room becomes much more versatile and you can do very dramatic things if you just have this option. And then also it comes down here for servicing. When it is lifted up into the room, it has several different positions in which it can lock. So this is very handy. You get it out of the way and then you can use the room for other things too.

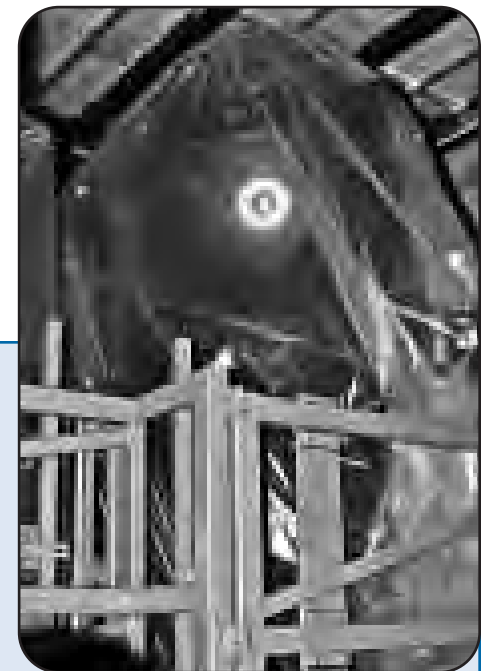
Alive!: What's the [price] that we're looking at there?

Dr. Ed Krupp: I have to be careful. If you don't take it as an exact quote ...

Alive!: Ballpark.

Dr. Ed Krupp: You're in the four million [dollar] ballpark.

Larry Gonsalves: The lift alone is pushing a million [dollars]. It's actually three lifts. It's the mainframe lift that travels up, does most of



the work, and then you have an individual lift with a lift for the star projector and for the planet projectors. And they operate at a higher speed or go a lot smoother. You need the two lifts to get to the height you need in the planetarium.

Alive!: Is this custom-made or does a company build lifts?

Larry Gonsalves: A company builds them. They specialize in theatrical lifts.

Alive!: Did you have to cut a hole in the ceiling?

Larry Gonsalves: Yeah. We had to cut a hole before we had the columns go down.

Alive!: Measure twice, cut once, right?

Dr. Ed Krupp: And that was like one of your simpler tasks.

Alive!: Amazing.

Larry Gonsalves: We even had to bring German power here. They don't [like] 240 volts.

Alive!: They had to put a transformer in? Is it all computer controlled?

Dr. Ed Krupp: Yeah, everything is computerized, so the performer can just go in having rehearsed to the timings and just deliver without having to worry about all of the other stuff that is going on. It's one of the primary goals.

Griffith Observatory Renovation



STOP 11

The Cosmic Connection

Dr. Ed Krupp: This is the Cosmic Connection, a very strange exhibit case. It's 150 feet long and about 18 inches wide. There will be an exhibit in here and it's again a very bizarre exhibit. This is fundamentally a timeline of the universe. It will start out basically time zero, the Big Bang and go from 13.7 billion years to now. It will be punctuated with sort of the big deal events that occurred, like when did the first stars occur. But we will punctuate that not with the imagery of modern astrophysics, but with popular culture,

things that in fact show that relationship we were talking about before, stars and planets and galaxies.

And to kind of put the seal on that, the timeline itself is not just a ruled line, it is a ribbon on which there are 150 feet of celestial jewelry, stars and moons and suns. We have a collection of extravagant costume jewelry that was given to us.

Alive!: Where is this being designed?

Dr. Ed Krupp: In-house. The fundamental pieces of it, the racks and such for supports, are by the exhibit designers, but the real work in here will be done by the Observatory staff. Exhibit designers in New York and fabricators in New Jersey are doing most of the exhibits, but there are some that are outside their scope.



STOP 12

The End of the Universe

Dr. Ed Krupp: You're looking here into the café at the End of the Universe, which is where the food service is gonna be. Wolfgang Puck is the concessionaire for this. You think Wolfgang Puck and you think high-end; how can anybody afford it? We get two million people a year and they're just plain folks. In fact, the restaurant did a great job of presenting what they would sell here; good prices, good value. It really was impressive.

Alive!: Will they take credit cards?

Dr. Ed Krupp: I'm sure they'll take credit cards.

Alive!: Thank God.

Dr. Ed Krupp: You'll have the ability to serve people in here, but on the other side of that second glass wall there can be tables. There can be carts up on the terrace or outside so

that there are a variety of opportunities for making food available, coffee and those kinds of things. And then the concessionaire will also handle catering for either interior activities or rentals or whatever happens along those lines, too. And that can be at whatever level the client decides they want.

Alive!: You buy your soda here, you walk out through these doors.

Dr. Ed Krupp: Yeah.

On the opposite side is the Stellar Emporium and Bookstore, and that will be operated by another concessionaire, Event Networks.

Alive!: Stellar Emporium. Who came up with that?

Dr. Ed Krupp: I'm guilty.

Alive!: I love it.

Dr. Ed Krupp: Everything has a name, and that's very deliberate: It establishes a kind of a sensibility for people, and it helps make it special and memorable. From the very beginning, we developed that as how we're gonna think about things.

STOP 13

The Edge of Space/The Richard and Lois Gunther Depths of Space

Dr. Ed Krupp: You have now reached the Edge of Space. When you step out to the edge, you're looking at the Gunther Depths of Space.

Remember I said we needed to fix this building, restore its historic architecture? Number two, we had to do something about the planetarium theater which was just falling down. The third thing we wanted to do was to add additional space to the Observatory to improve the visitor experience, not to get more visitors. Two million a year is enough. And so then the problem became how do you get more space on a building that's on a postage stamp piece of property? The only way to do it and not change the building was to go underground, and that is what created all of Larry's [Gonsalves'] grief.

Alive!: This is amazing.

Dr. Ed Krupp: That far wall is actually all going to be invisible because that's where the big picture is. If you imagine a sloped 20-foot porcelain enamel on steel wall, panels really, 144 panels fit flush all the way down around the corner to here. And kind of all up the ducts and everything. And that is this biggest astronomical picture of the world where you



see galaxies, galaxies, galaxies. It is right off the telescope at Palomar.

Alive!: Oh, that's what you were talking about before.

Dr. Ed Krupp: Among other things up here, there will be telescopes up here so people can make their own observations across the room. From here you see it is filled and then you walk closer and closer and closer and it's more and more filled. The experience just expands as you get closer to it.

Here on the Edge of Space, we primarily spotlight pieces of the sky, so it's a meteorite exhibit.

Alive!: You have a moon rock?

Dr. Ed Krupp: Oh, yeah.

Alive!: Did you always have the moon rock?

Dr. Ed Krupp: No. To have a moon rock put on loan in a facility like this, you have to comply with a variety of restrictions including security. The old building could never comply. We will be able to comply and we will be having a moon rock.



STOP 14

The Leonard Nimoy Event Horizon Theater

Larry Gonsalves: This is the Leonard Nimoy Event Horizon Theater. It's a 200-seat theater. And then we've got the projection room back behind us.

Alive!: Wow. This is cool.

Dr. Ed Krupp: We needed a second venue. You can do a pickup demonstration anytime

during the day for a formal lecture or a video presentation or anything.

Leonard Nimoy and his wife, Susan, donated \$1 million to the project. He was very important in our efforts to get federal money for the project. He came back to Washington with us and has helped us with his wife on other initiatives. They're sweet, wonderful people, both of them. Absolutely superb.

Alive!: Are you a Star Trek fan?

Dr. Ed Krupp: I like it, but I didn't follow it religiously. All science fiction movies, whether they were hokey or not, interested me, but I wasn't ...

Alive!: You weren't a big fan?

Dr. Ed Krupp: No, I wasn't.

Griffith Observatory Renovation

Tour, continued



STOP 15

The Robert J. and Suzanne Gottlieb Transit Corridor

Dr. Ed Krupp: Now you're in another important component of the Observatory, the Gottlieb Transit Corridor. And this is the north-south line that's established by these parallel walls of glass.

Our view is obstructed at the moment, but you can see at the far south end there is a black monolith that rises up like from 2001. When you start at that end of the Transit Corridor and descend the stairs, you are descending at the angle that points up to the north pole of the sky and Polaris. You get down in here and you see what astronomers imagine but people never get to see, the meridian, this ribbon of sky that goes across north to south.

It's called the Transit Corridor because an object, as it moves across the sky on a daily course like the sun, transits when it crosses this north-south line. Noon is the transit of the sun. Every day at noontime the sun will come across here, pass through an apparatus that's sticking up on that monolith that has a "highly complex" device on it ... it's got a hole in it. And the light goes through the hole and shines down on a structure that is a very ancient instrument ... an arc that curves up like this, where the light falls on it. It becomes in that sense a calendar.

We pick that light up as it is falling on the gauge, and we turned this into a 21st-century instrument. The light conducts a signal up to this wall, where there is a giant star map that lights up where the sun is and the stars are. So you have an event with the sun coming and crossing, lighting up the star map in the appropriate place, and then continuing on and the show going.

Alive!: A star map up here?

Dr. Ed Krupp: A star map mounted up on there, yes.

Alive!: Oh, so like a flat screen T.V.?

Dr. Ed Krupp: Yeah.

Alive!: Although it's actually...

Dr. Ed Krupp: ... structural, and the lighting sources will be embedded into the material. That's just the solar component of this. Just as we had sun and moon elements upstairs in the lines, this will have a component for moon events and for star events as well. This becomes a giant instrument that operates daily and on longer time scales for people whenever they happen to be here. It's like the telescope. If it's open, you get to look through it. If you're here at noontime, you get to see the event.

Alive!: Now is that really from the movie 2001?

Dr. Ed Krupp: It's just a black monolith.

Alive!: Well, Doctor, thank you.

Dr. Ed Krupp: Thank you. ■

The Renovation and Expansion Project

Overview

Three strategic goals guide the renovation and expansion of Griffith Observatory:

1. All systems and elements of the Observatory will be rehabilitated to their original grandeur and will be improved for the current level of public use.
2. The Planetarium Theater will be completely renovated and reconfigured to state-of-the-art, world-class technology in support of the most professional educational programming. Griffith Observatory is pleased to announce that in 2004 a generous gift from the Mrs. and Mrs. Samuel Oschin Family Foundation is sponsoring the Samuel Oschin Planetarium theater.
3. The Observatory will be expanded to provide more public program support space in order to improve significantly the quality of the visitor experience at the current level of attendance.

Two objectives support these goals and shape the design and development decisions being made on an ongoing basis.

1. Create an environment that sparks a sense of wonder so that each visitor is inspired to ask "big questions" about human existence in the cosmos: Who are we? Where are we? How did we come to be here? What will happen in the future?
2. Develop exhibit and programming content that supports the acquisition of knowledge, perspective and understanding by accurately exploring, illustrating and explaining fundamental astronomical phenomena and discoveries.

Public Benefit

Since opening May 14, 1935, Griffith Observatory has been a unique landmark in the Southern California landscape. Its prominent site, its extraordinary and spectacular architecture, and, most importantly, its mission of exposing visitors to the intriguing and inspiring cosmic wonders of the universe, lodges Griffith Observatory in the hearts of the millions who make the pilgrimage up Mt. Hollywood each year. It is the only public institution in Southern California with a science museum, a major public planetarium, and a public telescope, and one of the few in the entire United States.

Griffith Observatory is truly one of the most effective resources for informal science education in Southern California, attracting nearly 2 million visitors annually into the science museum. An additional 50,000 school children visited the Planetarium on field trips each year. They come because Griffith Observatory is the only public facility dedicated to presenting and explaining the complex astronomical discoveries made in the research observatories and space programs throughout the world. As mandated in the Griffith Trust, the Hall of Science and 12-inch Zeiss telescope are open free to the public nearly every day and every night of the year.

After more than six decades of continual use, however, with few capital improvements, Griffith Observatory, one of the world's premier examples of Moderne/Art Deco architecture, desperately needed restoration, renovation, and expansion.

Visitor Profile

The wonder and curiosity created by the Hubble Space Telescope and Mars Pathfinder images know no demographic or economic boundaries. Griffith Observatory showed Halley's Comet, Comet Hyakutake, Comet Shoemaker-Levy 9, and Comet Hale-Bopp each to more people than any other place on the planet. In one day, July 20, 1994, more than 15,000 children and their families joined in a free celebration of the 25th anniversary of the first moon landing. In one week, more than 25,000 children and their families toured a full-scale mockup of the American section of the International Space Station to experience the liv-



The front lawn of the Griffith Observatory was dug up temporarily to construct a major expansion underground. The lawn has since been restored.

ing space of space. More people – 7 million – have looked through the Observatory's telescope, than any other telescope on earth.

The general public is the heaviest user of Observatory facilities. This is true for both local residents and tourists. Based upon a 1994 visitor survey conducted in the Hall of Science, nearly 80 percent of Observatory visitors live in California, mainly Southern California. Of these, 31 percent live within the City of Los Angeles. In addition, the research indicates that 50 percent of all adult visitors bring children. Of these, half are between the ages of 12 and 18 years, and half are under 12 years of age.

Griffith Observatory is also a showcase for some additional millions of tourists who arrive for the best view of the Hollywood Sign in the City.

Renovation and Expansion

The renovation and expansion project will restore Griffith Observatory to its original grandeur and improve it for the current level of public use. By excavating under a portion of the front lawn and western terrace, the project will more than double the size of the Observatory without changing the classic appearance of the building. The following details the major areas of improvement.

The Samuel Oschin Planetarium theater. Griffith Observatory gives its visitors the original virtual reality experience: it delivers the night sky. It is a show no one else does as well. It is more important than ever in this era of all-pervasive light pollution. A key element of the Griffith experience is a visit to the Planetarium, now the Samuel Oschin Planetarium theater, where the stars are preserved like an endangered species. Audiences spontaneously applaud when they appear overhead. The current planetarium projector was installed in 1964. It is a testimony to Zeiss engineering and manufacturing that it worked as long as it did. When replaced, it will be put on display in the new museum as an important historical artifact.

Everything in the old Planetarium needed to be fixed. Audiences know that Griffith Observatory is world famous for having the most uncomfortable seats in the entire Milky Way Galaxy. The wooden headrests are legendary. The current plan calls for an improved theater with hidden space for new special effects technologies, for the sound system, for computerized control systems, and for a new all-dome laser projection system, as well as a new Zeiss Mark IX Universarium sky projector and all the other elements that modern, cutting-edge planetarium production requires in the 21st century.

The Hall of Science. Critically important to carrying out the Observatory's mission of presenting and explaining astronomy and science, the building and the telescope have been open day and night to the public free of charge since 1935. Despite more than 67 years of advances in both science and technology, the content and configuration of many exhibits had not changed since installation. Only two of the exhibits utilized modern interactive learning technology. Physical exhibit space was so limited that the Observatory's mission to bring science down to earth was severely truncated.

The main rotunda is noted for its massive Foucault Pendulum, custom marble, travertine, and mosaic work. The passage of time and earthquake damage diminished the impact of all these elements. During the project, the main rotunda will be restored to its original architectural grandeur of the 1930s.

The Hugo Ballin murals covering the ceiling of the main rotunda were damaged in the 1994 earthquake and must be repaired to prevent further deterioration. In addition to their artistic and historic significance, they are of cultural importance to Los Angeles and California. Depicted in the panels are the scientific achievements of a variety of national groups, including the English, Italian, Chinese, Egyptian, Greek, Arab and Mexican (Aztec) peoples.

Expansion of Facilities. Griffith Observatory is filled to capacity, serving more than 50,000 school children on field trips and nearly two million additional visitors each year. At these current attendance levels, the demand exceeds available resources. A primary goal of the project is to improve the visitor experience by the addition of approximately 35,000 square feet. Within this new space, flexible programming can permit more school children to participate in discovering the wonder of the universe.

A key element of this new space will be two new exhibit spaces with state-of-the-art exhibits; new exhibits also are planned for the existing, renovated Hall of Science. A new, 200-seat proscenium arch-style presentation theater, the Leonard Nimoy Event Horizon, is planned. Classrooms and a conference room will be added. Also, an expanded bookstore, new elevators to improve access to the entire building, and more restrooms are planned. A modest food service facility will be moved on site.

This information was taken from the Observatory's Website. ■



At the end of the Club-exclusive tour, from left: Club CEO John Hawkins, Dr. Ed Krupp, and photographer Tom Hawkins.



From left: Mark Brown, Rec and Parks City Attorney; Anne Waisgerber, Senior Park Ranger and Griffith Park Visitor Center Project Director; Rec and Parks Commissioner Christopher W. Hammond; and Park Ranger Joe Tafaya.



A look inside the new Visitor Center.

A Fresh Welcome

■ Visitor Center in Griffith Park is refurbished.

Story by Anne Waisgerber, Senior Park Ranger; Photos by Angel Gomez, Club Member Services Manager

REC AND PARKS — A new welcome awaits those who venture to Griffith Park. Rec and Parks opened its refurbished Visitors Center to the public Sept 22.

After several months of collaborating with Griffith Park Visitor Center Project Committee members Anne Waisgerber and Marie-Claire Sallaberry on planning for refurbishment of the aging and nondescript Ranger Station lobby, the Griffith J. Griffith Trust commissioned a private exhibit design firm, Universal Exhibits, in March 2005 to consult on final project and exhibit design, construction and installation.

Primary project elements included replacing a decayed wood ceiling, adding security and exhibit lighting, retiling stained and worn flooring, creating exhibits that feature park plants, animals, geology, and geography, including a 3D fiberoptic map of Griffith Park, installing a multimedia display, historic and current photos of Griffith Park and its benefactor Colonel Griffith J. Griffith, accompanying text panels, and installing and equipping an attendants' station and gift shop.

Supplementing the construction effort was the Rec and Parks facility repair staff, which refurbished a men's and women's restroom by replacing aging fixtures and configuring interior space to allow for wheelchair accessibility in compliance with ADA standards.

The Visitor Center exterior courtyard area was also improved by rebuilding a decayed wooden trellis, repainting walls, repairing security lighting, and replanting decorative landscaping with native specimens.

The Griffith J. Griffith Trust provided the funding necessary to build the Griffith Park Visitor Center. Park staff and visitors are indebted to Trust members Mr. Van Griffith, (great-grandson of Colonel Griffith J. Griffith), Ms. Clare Darden, and

Mr. Mike Eberts for their generous contribution, which has made possible the creation of a modern public space that duly recognizes the remarkable gift which park benefactor, Griffith J. Griffith, bestowed upon the citizens of Los Angeles. This project gives fitting recognition and pays deserved tribute to the unique urban landmarks, attractions, wildlife, geology and recreational opportunity that are now shared by millions.

The grand opening took place Sept. 22. Guest speakers included Councilman Tom LaBonge, Rec and Parks Assistant General Managers Jim Combs and Kevin Regan, and all three Griffith Trust members.

These individuals volunteered their time and talent to assist Marie-Claire and Anne Waisgerber with several aspects of the project: Muriel Kotin from the Audubon Society help to choose the birds on display and assisted with the text on the panel. Anne Mullins is translating our GPVC brochures into Spanish. Susan Immer assisted with the text for the history and Griffith wall displays. Fitz Munoz helped us prepare the history wall photos for display. Paul Wolfe worked with MC to design the door logo. ■



Muriel Kotin, San Fernando Audubon Society, helped to choose the birds on display and assisted with the text on the panel.



The front desk at the Visitor Center.



Albert Torres, Chief Park Ranger, 32 years.



From left: Mark Mariscal, Rec and Parks Metro Region Superintendent; Marie-Claire Sallaberry, Griffith Park Visitor Center Project Coordinator; William Maple, Universal Exhibits Senior Designer of the Griffith Park Visitor Center; Anne Waisgerber, Senior Park Ranger, Griffith Park Visitor Center, Project Director; Clare Darden, Griffith Trust Member; and Jon Kirk Mukri, Rec and Parks General Manager.



William Maple stands next to an exhibit.