







# FoKP Alternative Expansion Concept

**Legend:**

- Perimeter Fence: 
- Tram Access Road: 
- Buildings: 
- Hiking Trail: 
- Funicular Path: 
- Utilities Path: 



# Alternative Expansion Concept

## Friends of Knowland Park

### **Balancing Open Space with an effective Zoo Expansion**

This concept plan was presented in person to Nik Haas-Dehejia and Dr. Joel Parrott of the Oakland Zoo, and Darin Ranelletti of Oakland Planning Department on July 30 2010. This expansion concept has been conceived with the goal of preserving the existing natural settings and outdoor experience of the Knowland Park Open Space, and particularly the Western meadows above the Oakland Zoo, while at the same time providing adequate space and context for a successful expansion of the Oakland Zoo. The key to the concept is that the expansion footprint be contained to the west of the ridge line which separates Knowland Park from the existing Oakland Zoo, and which is proximal to the existing Zoo footprint. For the record, the Friends of Knowland Park would prefer that no expansion takes place and that the Zoo would adhere to its stated mission of true Conservation by further evolving the function of its existing Zoo spaces to fit modern Zoo needs. However, given that there are concept approvals and a formal agreement with the community in place from 1998, the terms of which were part of the previous approval, we feel compelled to offer a reasonable and prudent alternative to the current expansion proposal which has been put forth by East Bay Zoological Society. The current proposal which has been offered by EBZS is not appropriate to the balance of Knowland Park and the surrounding community, and so significant changes must be made to bring EBZS's proposal into compliance. This concept attempts to mitigate many of the key concerns of the community at-large such as environmental impacts, land use, and initial/ongoing costs, but it does not address other key concerns such as traffic, parking, and comprehensive emergency evacuation planning. The EBZS will still be expected to mitigate these other concerns adequately.

### **Key Concept Elements**

#### Access Road:

Our concept adheres to the 1998 MOU and Council Approvals by retaining the approved Tram Access road which completes a ring around the expansion. This delineation protects the community along Maggiora and Hellman, and well as portions of Mark Street, from the imposition of substantial construction and ongoing traffic along the Access Road, which is the key reason that the roadway was realigned during the negotiations that evolved the 1996 Master Plan into the 1998 agreements.

#### Perimeter Fence line:

The exterior fence line is then moved to mirror the road delineation, and this is done for two reasons: 1) to eliminate unnecessary environmental damage which would be necessary under the current proposal from EBZS, and 2) to eliminate unnecessary cost associated with the EBZS plan. By conforming the fence line to the Tram Access road, the fence can be easily built alongside or conjunction with the Tram Access roadway. This alternative concept also prevents unnecessary intrusion into the RCA zone of Knowland because the circuitous nature of the Access Road negates the need for access via Snowdown Ave, and it eliminates the more damaging “fence swale” which has been proposed to cut a swath across “Heart-attack” Hill. Finally, this alignment preserves remaining Knowland Park Open Space for future generations.

#### Replace Aerial Tram with a Funicular Tramway:

The aerial tram is inappropriate for this venue because it disrupts the Oakland Hills Skyline, would require substantial costs for installation and upkeep, and requires substantial and costly safety preparations. An earthquake or wildfire which disrupted power to the Oakland Zoo could leave guests stranded in the air, and could require a lengthy rescue effort to lower each group from each tram car to a rescue team below, and then to transport down through the vegetation to the zoo, for evacuation from there. The aerial tram also changes the existing verdant and unspoiled view-shed from surrounding areas, including the experience from I-580. We have proposed to replace the aerial tram with a Funicular (Inclined Railway) to improve upon these visual, financial, safety, and environmental impacts. The elimination of the aerial tram would result in significant cost savings and reduce the environmental impacts of construction. The current EBZS proposal calls for construction of not one but two corridors through Knowland, one for the tram towers and one for the utilities trenching. The FoKP concept combines the alignment of the funicular with the utilities alignment, thus saving substantial amounts of money and preventing unnecessary environmental impacts. This configuration would have the added benefit of lowering the transport to ground level, which would improve the safety of the guests/staff due to improved egress in the event of a natural disaster. These funicular railways can be installed with a staircase adjacent to the tracks, and could easily provide manually operated ADA-compliant emergency railcars to evacuate guests with ADA needs along the adjacent rail.





The Funicular has other benefits over the Aerial tram. The Aerial tram in the EZBS plan would only have terminals at top and bottom, whereas the Funicular rides along the ground level and so could have multiple stops along the route from bottom to top. Each stop might have interactive viewing platforms, restrooms, and possibly water stations for the guests' convenience, and because the Funicular railway is aligned with the Utilities trench, these electrical and plumbing elements would be simple and inexpensive to add at various places along the route to the top. This inherent feature of multiple stops is what allows the Zoo to provide access to different levels of access on this sloped parcel, and would allow guests to experience different levels of the new exhibits on trails and walkways which would stem out from the Funicular, allowing them to explore the Oak woodlands and meadows between exhibits. We feel this would provide the guests with an authentic natural California experience conveniently, safely, and more efficiently, and it would allow the Zoo to meet ADA standards.

### Interpretive Center

The location of the Interpretive Center in our concept is designed to coincide with the optimal alignment of the Funicular railway, and it will provide spectacular views of the Bay Area, Oakland, and San Francisco, and the Bay Bridges. The location provides substantially better sun exposure than the EBZS-proposed location, and we are proposing that the Interpretive Center include extensive solar panels (possibly in a PPA-style agreement) to offset their electricity uses for the Funicular and incidental needs. The height of the Interpretive Center in our concept is intended to be much lower than that

proposed by EBZS, and should be as invisible as possible from the surrounding community and the scenic corridor. We expect that the building should be a combination of one and two stories high as appropriate to keep the Center low on the hillside. The Interpretive Center roofline should not break the Ridge line when viewed from areas below and above. The Interpretive Center will be serviced via the Funicular Tramway and the Tram Access Road, and so its location is proximal to the Tram Access road at the top of the site.

### Hiking Trail

The concept design is intended to provide a balance of nature experiences. It satisfies the desire of EBZS to have a compelling “packaged”, paid learning experience for Zoo guests, with healthy space for animals along with all the amenities such as restaurant services, classrooms, and bay views. However, the US has a major childhood obesity problem, and while the Zoo’s proposal addresses ADA guidelines and baby strollers, this concept would be negligent if it did not offer options to combat the obesity epidemic when it is a golden low-cost opportunity. We feel that access to the Knowland Park Open Space should be improved, providing a better balance of outdoor experiences in tandem with the Zoo expansion. One of the oft-cited criticisms of Knowland Park has been that public access is limited, with very little off-street parking. We have included a hiking trail in our concept, which encircles the Zoo expansion, to address this issue. Users could park inside the Zoo, and then begin their experience at the Arroyo Viejo Creek Restoration site. As they hike up the canyon and onto the upper meadowlands, they could learn about the ecosystems and various habitats along the way. They could picnic at the top overlooking the bay, and then choose to enter the Zoo at the top or hike back down. The Zoo could control entry at the upper gate by only allowing ingress for guided groups led by Zoo personnel, like school groups or Boy/Girl Scouts, and informal hikers would be expected to hike back down to their cars. The key element of the trail, though, is that the general public would have improved access to Knowland Park via this trail for unmediated educational experiences, for free. With this hiking trail, visitors can experience the controlled experience of the Zoo enhanced by a completely natural experience of Knowland Park, for no extra cost.

### Veterinary Hospital

In the negotiations between 1996 and 1998, one of the key points of agreement was that the major elements of the new Zoo expansion would be kept as far away from the South Hills Neighborhood as possible. The proposed Veterinary Facility/Breeding Clinic does not conform to that agreement, and must be moved farther away from the South Hills Neighborhood. Our concept addresses this key concern by moving the Veterinary inside of the Zoo “envelope”, to a more central point of the Zoo. This location has several key benefits: it is inside the core Zoo perimeter for security of the animals and the safety of the general public, it is closely aligned with the Utilities alignment for lower cost of construction, it is more proximal to existing Zoo exhibits, and sick or injured animals can be transported directly to the Hospital from

their respective enclosures more securely by using the Northern half of the Tram Access road. This arrangement would reduce the likelihood of an animal escape during transfer between their enclosure and the confines of the Vet Facility.

Another benefit to relocation of the Vet facility is the environmental benefits of staying out of the creek drainage. This will save the Zoo the tremendous expense of building the extensive water-management mitigations that are currently being planned to conform to Creek Protections. Shifting the Facility to the approximate location shown on our concept moves it out of the creek drainage to a location with similar gradients to the location currently proposed by EBZS.

#### Gradients and slopes

We urged the Zoo to consider this alternative site in the Spring of 2008 and then again in several public meetings. The current Zoo proposal includes exhibit spaces and guest walkways that traverse gradients exceeding 30%, and their proposal has located construction of the Visitors' Center in a location with gradients exceeding 40%. Our concept locates the Visitors' Center on a gradient that is less than 20%. Our concept will utilize the same methods proposed by EBZS in their current proposal, using moderate grading and bridging techniques as well as some elevated walkways to maintain consistency with ADA requirements while providing a wonderful experience for guests. Each trail that traverses the hillsides will connect on the outer perimeter with the Tram Access ring road, and connect with the Funicular corridor at the center of the exhibit site. Further evidence that this site is feasible for Zoo expansion is the fact that other Zoos such as the San Diego Zoo have managed to build World Class animal exhibits in very steep terrain.

#### Traversing the space: Guest Access to exhibits

Furthermore, all walkways that traverse above and below the exhibit spaces in our concept can be built to conform to ADA guidelines in the same manner that the current EBZS proposal does. Note that the current EBZS proposal utilizes elevated walkways to traverse very steep slopes, so clearly it must be feasible. Walkways would contour along the slopes, and would use a mix of bridges, elevated walkways, and graded pathways as a balanced approach. Guests would wind along these pathways through in and out Oak Woodlands and open Meadows, and the contours of the terrain will add to the experience of viewing these various animals with viewpoints from above and below.

#### Canyons and Aviaries

The current EBZS Proposal outlines a location for a dual-split aviary on the steeper hillsides of their proposed site. In our concept, the aviaries could conceivably be placed in either or both creek drainages, as originally proposed and approved in the 1998 decision. The design of these aviaries would avoid the Creek Ordinance by locating their skeleton structure outside of the drainages, and total volume of the aviary would increase by virtue of using the drainage for increased flying space. Another benefit of using the canyons for the aviary is that the entire structure could remain below or quite close to

tree level, thus avoiding disruption of the Oakland Hills skyline, and would be camouflaged to further hide the structure from view. Our concept also calls for elevated walkways to be integrated with the skeleton structure of the aviary, as part of the pathways which traverse the exhibits. By this method we effectively combine these two elements for better viewing pleasure and simultaneously reduce the cost of building these elevated walkways across the creek drainages

Total footprint of Expansion:

Zoo proposal: 56.26 acres

FOKP concept: 40.4 acres

Cost:

Cost of construction and ongoing maintenance is a huge concern for Oakland taxpayers, so we have tried to consolidate features and elements of the expansion to allow for simultaneous builds of various features. For example, our design melds the Transportation and Utilities elements of the plan into a “central nervous system” of the planned site, and it locates the perimeter fence adjacent to the Tram Access Roadway, allowing for more efficient use of the site and thus reducing construction and ongoing maintenance costs.