



Oregon Zoo Bond Citizens' Oversight Committee

Skyline Room, Oregon Zoo
Wednesday, Sept. 13, 2017
3 to 5 p.m.

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting
Sept. 13, 2017
Agenda

AGENDA

ITEM	ACTION	ANNUAL REPORT	LEAD	TIME
A. Welcome / Introductions • Agenda overview	Review		Ruth Shelly	3:00 – 3:05
B. Minutes of May 10, 2017 Committee meeting	Approve		Ruth Shelly	3:05 – 3:10
C. Appointment of Oversight Committee Vice Chair	Info		Ruth Shelly	3:10 – 3:15
D. Monthly Project Status Reports 1. Education Center 2. Polar Passage/Primate Forest/Rhino 3. Interpretive Experience 4. Percent-for-Art 5. Electrical Infrastructure	Discuss	Page 22 (see item G.) Page 27 Page 27	Heidi Rahn, Jim Mitchell	3:15 – 3:35
E. Program Status and Financial Information at a Glance	Discuss	Page 37, 40	Heidi Rahn	3:35 – 3:45
F. Program and Projects Schedule	Discuss		Heidi Rahn	3:45 – 3:50
G. Polar Passage/Primate Forest/Rhino schematic design • Site layout • Interpretives • Art	Discuss	Page 17, 24, 38, 40	Heidi Rahn, Jim Mitchell	3:50 – 4:30
H. Zoo and Metro update	Update	Page 40	Heidi Rahn	4:30 – 4:50
I. Open Discussion/Questions	Discuss		Ruth Shelly	4:50–5:00

Upcoming meeting dates –Wednesdays, 3 to 5 p.m.:

Nov. 8, 2017 Conservation Hall, Education Center, Oregon Zoo
Feb. 14, 2018 Skyline Room, Oregon Zoo
May 9, 2018 Skyline Room, Oregon Zoo
Sept. 12, 2018 Skyline Room, Oregon Zoo
Nov. 14, 2018 Skyline Room, Oregon Zoo



Oregon Zoo Bond
Citizens' Oversight
Committee Meeting
May 10, 2017
Agenda item B

Oregon Zoo Bond Citizens' Oversight Committee

Oregon Zoo – Conservation Hall, Education Center
Wednesday, May 10, 2017
3 to 5 p.m.

MINUTES

MEMBERS PRESENT

Ruth Shelly (Chair)
Dan Aja
Noah Bishop
Linda S. Craig
Heidi Goertzen
Susan Hartnett
Mickey Lee
Jill Mellen
Daniel Morris
Robyn K. Pierce
Katherine A. Porras
Kevin Spellman
Dick Stenson

AFFILIATION

Portland Children's Museum
Banfield Pet Hospital
Bishop Bankruptcy Law, LLC
Retired CPA; nonprofit treasurer
Ferguson Wellman Capital Management
Spectator Venues Program Manager, City of Portland
NW Natural
Research Biologist
Daniel Morris Research, LLC
Pierce, Bonyhadi & Associates
Meyer Memorial Trust
Spellman Consulting, Inc.
Retired healthcare executive; community volunteer

MEMBERS ABSENT

Deborah Herron
Mike Schofield
Christi L. Taylor
Tom Turnbull
Karen Weylandt

AFFILIATION

Walmart
Gresham-Barlow School District
Miller Nash Graham & Dunn
OpenSesame Inc.
Providence Health & Services

GUESTS

None

AFFILIATION

ELECTED OFFICIALS AND STAFF

Shirley Craddick	Metro Councilor
Scott Cruickshank	General Manager of Metro Visitor Venues
Julie Fitzgerald	Oregon Zoo Foundation Executive Director
Caleb Ford	Metro Assistant Finance Manager
Jim Mitchell	Oregon Zoo Bond Construction Manager
Don Moore	Oregon Zoo Director
Joel Morton	Metro Senior Attorney
Linnea Nelson	Oregon Zoo Bond Program Coordinator
Heidi Rahn	Oregon Zoo Bond Program Director
Scott Robinson	Metro Deputy Chief Operating Officer
Marcia Sinclair	Oregon Zoo Marketing
Grant Spickelmier	Oregon Zoo Education Curator
Cary Stacy	Metro Office of the COO Project Manager

A. Welcome / Introduction

Ruth Shelly, Oregon Zoo Bond Citizens' Oversight Committee Chair, opened the meeting at 3:03 p.m., and members and guests introduced themselves.

Chair Shelly indicated that she would like to appoint a Vice Chair to assist when she is not available and prepare for the end of her term in early 2018. She asked members to let her know if they are interested in serving in the role for the coming year.

Two members shared about their new jobs: Mickey Lee is now at NW Natural as an Energy Advisor, and Daniel Morris has started his own research consultancy, Daniel Morris Research, LLC.

Julie Fitzgerald, the new executive director of the Oregon Zoo Foundation since April 10, introduced herself. She has been working in fundraising for a long time. The last six years she served as director of philanthropy for The Nature Conservancy's Oregon chapter, leading its major gifts program. Prior to that, for 8.5 years she led the major gifts fundraising program for the Oregon Health Science University School of Medicine and served as associate director of planned giving for the OHSU Foundation. She has a degree in animal science from Oregon State University, and formerly managed her family's sheep ranch. She was also the Portland Children's Museum's first director of development in the late 1990s. She appreciates the opportunity to work with the zoo and Metro, and will work to engage residents and philanthropists with animals, conservation education, and the mission to create a better future for wildlife. Chair Shelly thanked her for OZF's support of the zoo bond program.

B. Approval of March 9, 2017, Oversight Committee meeting minutes

Members approved the minutes of the March 9, 2017, Oregon Zoo Bond Citizens' Oversight Committee ("Oversight Committee" or "the Committee") meeting. Chair Shelly thanked those who had attended this extra meeting to recommend allocation of remaining funds.

C. Zoo Update

Don Moore, Oregon Zoo director, gave a zoo update. He welcomed them to the beautiful new Education Center, which opened March 2, 2017, and has already had a variety of events throughout the building. The many external partners of the Education Center are doing amazing programming and using the facilities.

He thanked Committee members for their diligence and oversight in recommending the fund allocation for the remainder of the program, which the Metro Council approved in March. As the zoo heads into the final stretch with the last few bond projects, the zoo is so fortunate to have resources available to address cost escalation, project modifications and project closeouts.

One of the zoo's top priorities now is designing Polar Passage, Primate Forest and the rhino habitat renovation, all of which the bond team is working on. He thanked Julie Fitzgerald for OZF's assistance with evaluating the project needs, and appreciates the expertise she brings.

The zoo is working on developing a sustainable financial model, and also participating in a Washington Park master planning process to ensure the zoo's guests can continue to access the zoo.

Another zoo priority now is developing goals and guiding principles for the zoo's conservation work, known as the Integrated Conservation Action Plan (ICAP). Dr. Moore introduced Cary Stacy from Metro's office of the Chief Operating Officer, who is the new ICAP project manager. She will be

developing goals and guiding principles over the next few months with a core team of zoo staff. Oversight Committee member and research biologist Dr. Jill Mellen has also agreed to serve on the Zoo Conservation Goals Advisory Committee, a small committee of stakeholders to advise the zoo ICAP team.

The zoo is heading into a busy summer season, with an excellent concert line-up and camps at the new Education Center.

Last week Dr. Moore attended in Detroit, Michigan, the Global Animal Welfare Congress, sponsored by the World Association of Zoos and Aquariums and the Detroit Zoo. This event emphasized how prioritization of animal welfare is a must if zoos and aquariums are to remain relevant in the next century. More than 200 zoo directors participated, and were asked to consider ethical dimensions of zoos and the global commitment of zoos and aquariums to be animal welfare centers. With our exploding human population, wildlife populations continue to decline and wild mammals are now less than 7 percent of all biomass on Earth. This makes our zoo-based conservation activities more relevant than ever. The Congress also discussed accreditation standards and the need for consistency across the world. It is exciting to be contributors to this dialogue and to be raising the bar on animal welfare.

D. Oversight Committee Annual Report presentation to the Metro Council

On April 13, Chair Shelly presented the Committee's 2017 Annual Report covering the calendar year 2016 to the Metro Council, and the report was very well received. The Council noted that the Committee's work is very thorough, and appreciated the summary of recommendations at the front of the report, the financial graphs and the bond timeline graphic. Chair Shelly said that members should feel proud of the report. It is more than just paper, because it represents democracy at its best, with citizens helping to bring a community vision to life. She asked members to bring their printed copy of the report to subsequent meetings to use as a reference and to track progress on the recommendations. The report is a roadmap for the Committee's work, and recommendations are referenced on the meeting agendas with the corresponding report page. She displayed a spreadsheet staff developed to help plan for and track progress on each recommendation. She especially thanked Linnea Nelson and Heidi Rahn for their work on compiling the report. Ms. Rahn acknowledged that Chair Shelly did a great job presenting to the Metro Council, and that the Committee was well represented. She reported that Chair Shelly skillfully guided the Council through the 50-page report, highlighting the important points.

Councilor Shirley Craddick spoke about her appreciation of the Oversight Committee. For her it has been interesting to learn the value of this group more and more over time, and she is very impressed with the role the Oversight Committee plays. The Committee plays a key role in overseeing the expenditure of funds over many years and ensuring that the bond program has enough money for all the projects, despite the fact that construction costs are escalating quickly. It's the diligence of this group that allows the program to deliver on the voters' expectations. The Committee's work also creates public confidence, which allows Metro to ask for funding again from the people the Council represents. She thanked the members for taking the time to serve on this committee. Chair Shelly thanked Councilor Craddick for being a wonderful bridge between the Council and the Committee.

E. Metro Council allocation of remaining zoo bond program resources and approval of amendment of the Polar Passage CM/GC contract to include the Primate/Rhino project

Heidi Rahn reviewed the process by which the Metro Council approved reallocation of the remaining bond program resources and the approval to amend the Polar Passage contracts for design and

construction management by general contractor. Starting in Sept. 2016, a Budget Subcommittee of the Oversight Committee analyzed construction cost escalation, and proposed project modifications and program budgets. At its March 9, 2016 meeting, the full Committee voted to recommend to the Metro Council approval of the project modifications and \$12.5 million funding allocations as presented by staff. This recommendation was approved by the Metro Council on March 16, 2017:

- Shift existing unallocated bond resources to the projects.
- Modify project scopes and related costs.
- Combine Polar Passage and primate/rhino design and construction contracts.

Unallocated	\$12.5 million
Primate/Rhino – cost escalation	(\$2.6 million)
Polar Passage – cost escalation	(\$1.0 million)
Polar Passage – OZF enhancements	(\$1.3 million)
Electrical infrastructure	(\$1.5 million)
Contingency for bond close out	(\$1.0 million)
Program administration	<u>(\$3.3 million)</u>
Remaining unallocated	\$1.8 million

On April 6, 2017, the Metro Council approved amendment of the Polar Passage design and construction management by general contractor (CM/GC) contracts to include the Primate Forest/Rhino project, which is expected to save \$1.3 million. Staff are already seeing some of those cost savings, for example in CM/GC pre-construction fees and geotechnical savings. The combined project schedules will be updated and provided to the Committee once the sequencing and phasing are finalized. The reporting on these projects may be merged into one report. The project team is focused on bringing the Primate Forest/Rhino design up to speed with that of Polar Passage. Two of the big project modifications include demolishing part of the primate building and adding more saltwater (vs. freshwater) pools to Polar Passage.

Chair Shelly clarified that contingencies are included in each project budget, so the \$1.8 unallocated amount is not really for unforeseen construction circumstances.

F. Zoo Bond Program Equity in Contracting Quarterly Report, April 2017

Ms. Rahn pointed out the highlights of the Zoo Bond Program Equity in Contracting Quarterly Report, April 2017, which includes data through March 2017 (a copy of the report was included in the meeting packet). The bond program has an aspirational COBID-utilization goal of 15 percent (by dollar value of COBID-eligible work) for each construction project. Currently the program has a COBID utilization rate of 14.7 percent. (COBID refers to businesses certified as minority-owned, women-owned, disabled-veteran-owned or emerging small businesses.)

The CM/GC for the Education Center, Fortis Construction, currently has a 29.4 percent rate, which represents a big win for the program.

Construction has not started on the Polar Passage project yet, but CLR Design proposed a COBID utilization rate of 26.7 percent for the project.

The bond Equity Report also includes information regarding some of what Metro is doing to advance equity in contracting. Metro launched the Construction Career Pathways Project (C2P2) to assess the

region's construction workforce supply and demand outlook. The project will look at the regional context, the overall capacity to meet growing demand, the current workforce composition as it relates to the increasing demand, and the existing opportunities for future workforce growth across the overall regional industry. The City of Portland is contributing funds to the study.

Kevin Spellman asked about the timeline for the market study, and staff agreed to get back to the Committee when a draft report will be available. Post meeting note: The draft will be available in late 2017. The engagement strategy for the project includes many jurisdictions that are participating, as well as school districts.

G. Elephant Lands interpretive displays summative evaluation

Zoo education curator Grant Spickelmier presented a report on the summative evaluation of the Elephant Lands interpretive displays (a copy of his presentation is included with the record).

He reviewed the research-based approach used for the interpretives. It included a front-end evaluation that found out what visitors know about conservation issues and the exhibit. This was followed by formative testing that tried out designs with selected visitors, and tested content with diverse communities to see if the approach felt welcoming and relevant. Once the interpretives were installed, a summative evaluation looked to see if people actually learned what the zoo wanted them to learn.

The summative evaluation included six guiding questions and was a multi-modal study with three evaluation methods: a visitor intercept survey, a timing and tracking study, and focus groups. The timing and tracking study looked how visitors navigate at each main habitat area and the activities of visitors at each habitat. The average visitor-stay time was more than eight minutes, and visitors had longer stay times if elephants were present in the habitat. The Green Living Signs that highlight sustainability were the least-frequently engaged exhibit components. This was the first time for the zoo to put up such signs, which may be part of what contributed to the low engagement for that element. The zoo will continue to have the same sustainability brand at other new exhibits, which is expected to increase engagement.

Before Elephant Lands was completed, 64 percent of respondents agreed or strongly agreed that Oregon Zoo elephants have a good quality of life. After Elephant Lands opened, that perception moved to 91 percent. (In the focus groups, the evaluators had to really push to get visitors to say anything negative about Elephant Lands.) With regard to appreciation of the new habitat, 93 percent of respondents said the exhibit design effectively or very effectively nurtured natural social behaviors and choices. Most visitors take pride in the Oregon Zoo and what it is doing for elephants at the zoo and in the wild. Ninety-eight percent agreed or strongly agreed that this exhibit shows that the Oregon Zoo is committed to the welfare of elephants.

The front-end evaluation had shown that visitors' number-one engagement interest was to be able to identify the individual elephants, so the zoo installed six different interpretive locations to help. Visitors especially liked the north meadow interactive exhibit where they could listen to elephant infrasonic sounds. A replica of Packy's foot provides a touchable exhibit.

Visitors showed an increased empathy and respect for the elephants as a result of the exhibit. Mr. Spickelmier noted that it is hard to get an increase in showing a stronger connection to animals, because the people that come to the zoo already feel a connection due to their frequent visits.

Most visitors were familiar with the threat of elephants poached for ivory in the wild, but 54 percent were not aware of the palm oil conservation crisis. Much awareness of the zoo's role in conservation is coming from social media, and not so much from the exhibit. The exhibit signs are just one piece of the larger interpretive puzzle to convey messages. The Elephant Lands exhibits were created before the zoo started its project to help Bornean elephants, so that information may add that to the exhibit later.

Visitors indicated their willingness to take actions to help elephants. Fifty percent of survey respondents were zoo members, otherwise the results for likelihood to become a zoo member would most likely have been higher. Elephant Lands helped visitors see the value of zoos. The interpretive team effectively showed that elephants at the zoo are in good hands, and that the Oregon Zoo makes their lives healthy here and also helps elephants in the wild. The interpretives and exhibit itself work well together to send the same message that elephants are worthy of respect.

Chair Shelly congratulated the team on fabulous evaluative results and stated that a stay time of more than eight minutes is unheard of in the industry. The results demonstrate that the interpretives help people stay focused.

The Oregon Zoo is also participating in two other elephant studies, along with the University of Queensland and 13 other zoos internationally. The studies are looking at how different value systems impact the exhibits. People tend to develop exhibits that reflect their own value structure. Focus groups are being held at the zoo today. Another study is with the Chicago Zoological Society, looking at the international relevancy and value of elephants in zoos. This study will provide significant information about the Elephant Lands exhibit.

A summative evaluation of the interpretives at the Education Center will probably be scheduled for this fall, and the results will be shared with the Committee when they are complete.

H. Interpretive goals for Polar Passage

Interpretive planning for Polar Passage has been going on for two months, and Mr. Spickelmier reviewed the front-end evaluation results. People are aware of climate change issues, but did not know about underweight female polar bears not having cubs, and they did not know that the Oregon Zoo is working to help polar bears in the wild. Four primary themes were identified: 1. Polar bears and their habitats are amazing. 2. Polar bears are struggling with the effects of climate change. 3. Our keepers and bears work together as partners in conservation science. 4. You can make a difference for polar bears.

He reviewed the three types of measured outcomes – knowledge, affect and behaviors – that will be evaluated once the project is complete. For changing visitor behaviors, the team is looking at how to make it a norm in the community for people to take actions and share them with others. Also, they are looking at how people can interact with the bears (perhaps a sniff area?), and show as much bear training in the public eye as possible. They are also working to make the messaging flexible and refreshed over time.

Jill Mellen applauded the planned positive messages, and referred to research done with children exposed to negative messages about the environment that made them not want to talk about nature.

Members discussed some of the interpretive concerns related to climate change, including political sensitivity related to advocacy. Some people may not agree with climate change messages, which could

prevent them from getting the exhibit messages. Focusing on the changing Arctic conditions and not calling it “climate change” may be beneficial. Staff has attended training to learn how to talk effectively about climate change, especially with people who question scientific authority. Effective themes include stewardship of the Earth, responsibility, and a heat-trapping blanket analogy.

Dr. Moore spoke about efforts to have more polar bears come to the Oregon Zoo. Efforts are being made to get the entire captive bear population under the Species Survival Plan designated as a research population, which would allow them to come to the United States. “Problem” bears that encroach on human settlement and interact inappropriately with humans are pouring out of the wild, and the two Canadian facilities for them will be full this fall.

Councilor Shirley Craddick suggested focusing on ice in the exhibit, so the public can see how the bears interact with the ice. An ice flow play game for children, incorporating melting ice in the art, and a refillable bucket of ice for visitors to dump for the bears were also suggested.

The interpretives for Primate Forest are not yet developed, but will focus on the production of palm oil and its impact on habitat, and sustainable wildlife-friendly production. The zoo has already done an evaluation of palm oil in products used at the zoo, and all the products at the zoo are from companies that have commitments to sustainable development.

I. Monthly Project Updates

1. Education Center

Since it opened on March 2, the building has been a success, and the zoo’s conservation partners love it. The contractor is working through the punch list and close-out tasks. The project is an award finalist (1 of 90) in the Daily Journal of Commerce 2017 Top Projects awards event on May 18. Post meeting addition: At that event, the Education Center was awarded three awards: 2017 Energy Trust of Oregon High Performance Building Award for New Construction, People’s Choice New Construction, and Public New Construction Third Place.

The Education Center “dashboard” display showing solar and other energy use is still in progress, while the building is still in commissioning. An interactive touch screen will show usage. Linda Craig said such a display will be helpful since there is a lack of understanding that it is possible to actually do solar in Portland. A periscope go pro in the Nature Exploration Station (NESt) will allow visitors to see the expanse of solar panels on the roof. The project has been submitted for Leadership in Energy and Environmental (LEED) accreditation, with a decision most likely two months out. The project team is also working on net-zero energy operations certification, which will take a year to finalize.

2. Polar Passage/Primate Forest/Rhino

Jim Mitchell indicated that the Polar Passage schedule shows caution. He is working on reconciling estimates of the CM/GC Lease Crutcher Lewis and the architect CLR Design. The Primate Forest/Rhino project is looking good, but Polar Passage still needs some work to bring it within budget. Staff found areas where the design can be improved. The focus now is working on the Primate Forest/Rhino design, while the Polar Passage design is on hold for now, so both projects can be brought to the same level and staff can work on them together going forward. In another month, the Primate Forest/Rhino project should be caught up. Primate Forest is on schedule from its original schedule.

The team is working on different scenarios for scheduling and phasing plans. The project will have to close the main “zoo street” for a while. The combined project will have a 20- to 22-month schedule (compared to 30 months if the projects had been done separately). Metro will also save on general conditions costs with the projects combined.

The projects are adjacent to each other, and it is more efficient to do them together. The team is still working on the subcontracting plan for the different combined project elements. The different parts of the project may not all finish at the same time, but visitors will be able to see progress along the way. The zoo is working to find other ways to keep visitors happy and engaged during construction. The project may have to schedule around ZooLights and summer concerts, in order to keep revenue-generating activities going for the zoo. A new giraffe feeding station is planned to engage visitors and generate funds for conservation. This is not funded by the bond funds.

The Primate Forest project is coming along well, with the scope to meet the needs of three species – gibbons, chimps and orangutans. The Committee will hear more about that as the plan is defined.

The Polar Passage team is trying to design for behind-the-scenes visits, which are premium experiences, and the zoo wants that revenue to go back into conservation. The team is also working to bring as much as possible of bear training for conservation research from behind-the-scenes up front for all visitors to see.

Susan Hartnett felt it important to remind people that the schedule is delayed due to combining the projects in an efficient and cost-saving way. It is not that something is going wrong, but rather is intentional to make the project better.

3. Interpretive Experience

Interpretive funds are now (starting with the Education Center) incorporated in each project budget, except Wayfinding, which is paid from the original Interpretive budget. Almost all of the Wayfinding elements are installed, except one kiosk that will be installed as part of Polar Passage when the Central Plaza is complete. Until then, the team will not have monthly reports regarding the Wayfinding project. The Wayfinding budget has been updated with a \$130,000 contribution from OZF for the Elephant Lands identification app and the donation station.

4. Percent-for-Art

Ms. Rahn reported that she has met with the Polar Passage commissioned artist team of Edwin and Veronica Dam de Nogales. They are planning to make impactful pieces that will inspire action, but could trigger some mixed emotions. The team is working on the art concept in conjunction with the Polar Passage design, and will probably have more on that at the next Oversight Committee meeting in September. The Percent-for-Art budget is based on building construction costs, and not on road or utility costs.

5. Electrical Infrastructure

Next month the program will have a project report for the new electrical infrastructure project.

J. Project Status and Financial Information at a Glance

Bond staff provided a new format for the Project Status and Financial Information at a Glance Report to better reflect all nonbond funds and the budget changes allocations approved by the Metro Council.

The program resources section was simplified to show the three primary revenue categories (bond, OZF, other nonbond). A column now shows funds not yet received. The new format minimized the notes at the bottom of the report. Going forward, new notes will be displayed on the report for two months, and then be removed. Chair Shelly applauded staff on the new format.

K. Program Schedules

The Primate Forest/Rhino project has been added to the Active Projects Schedule, and will be updated when the phasing plan is finalized. To date the monthly reports have included both an Active Projects schedule and an All Projects schedule. Since all remaining projects are now on the Active Projects schedule, staff recommends discontinuing the All Projects schedule. Staff agreed to add a list of completed projects with the start and completion dates on the Active Projects schedule, to remind readers of overall progress. Members asked that the schedule show progress on Polar Passage and Primate Forest/Rhino separately on the schedule.

Councilor Craddick noted that the bond program will span 10 years, and asked what next steps the Metro Council needs to be considering. Staff is looking at what is in the next phase of the zoo master plan, to identify priorities and tee that up for conversation with the Council. The Oversight Committee is not responsible for a next phase of the master plan, but it is responsible for making recommendations for the \$1.8 million of unallocated bond funds and how they are spent. Some of those funds could be used for updating the zoo's 20-year master plan for the second 10 years. The zoo's Conservation Action Plan will inform the next decade of the zoo's priorities. Don Moore said the zoo may look at extending the Master Plan beyond another 10 years. The zoo is just starting conversations internally to prepare for a new land use plan and permit that will be required in 2021. A question was asked about putting Master Planning on the schedule, as part of preparing for the success of a next bond measure.

L. Adjournment

Chair Shelly adjourned the meeting at 5:00 p.m.

Upcoming 2017 meeting dates –Wednesdays, 3 to 5 p.m.:

Sept. 13, 2017 Skyline Room, Oregon Zoo

Nov. 8, 2017 Conservation Hall, Education Center, Oregon Zoo



Oregon Zoo Bond
Citizens' Oversight
Committee Meeting
Sept. 13, 2017
Agenda item D

Oregon Zoo Bond Citizens' Oversight Committee meeting

Sept. 13, 2017

Agenda Item D. Monthly Project Status Reports

1. Education Center
2. Polar Passage/Primate Forest/Rhino
3. Interpretive Experience
4. Percent-for-Art
5. Electrical Infrastructure



Oregon Zoo Bond Project Status Report Education Center

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting

Sept. 13, 2017

Agenda item D-1

Project Title: Zoo Education Center	Project Manager: Kate Giraud
Reporting Period #047/Status Date: August 25, 2017	Project Manager Phone: 503-548-2677
Architect/Engineering Design Consultant: Opsis Architecture	Construction Manager/General Contractor: Fortis Construction
Project Description: The zoo Education Center will be located at the site of the original zoo entrance. It will provide flexible and engaging education program activity spaces for camps, classes, and zoo visitor and program partner use. In addition to the education programming at the Center, the project includes visitor comfort amenities identified for the "West Hub" in the Comprehensive Capital Master Plan, including but not limited to: train ticket sales, restrooms, wayfinding/trip-planning material, seating and food. Finally, this project includes a portion of infrastructure improvement work, identified in the Master Plan, to address storm water and aging site utilities.	

Status at a Glance

Status Item	On Track	Caution	Off-track
Budget	X		
Schedule and signoffs	X		
Deliverables	X		

LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

Design and Construction Schedule

START DATE		COMPLETION DATE	
ESTIMATED	CONTRACT	ESTIMATED	CONTRACT
4/21/14	6/25/14	3/1/17	12/29/17

Project Budget and Expenditures

ORIGINAL BASELINE	REVISED BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$12,899,510	\$17,504,125*	\$17,381,943	\$17,504,125	\$0

* The Education Center budget was updated in April 2016 with funding from unallocated bond contingency (authorized by Metro Council) for add-alternate list and net-zero solar energy, plus additional funding for south entry storm pipe construction (co-funded with City of Portland), Metro Resource Conservation and Recycling funds for the Wildlife Garden construction, and previous bond project savings reinvested to meet state solar requirements and security infrastructure.

Critical Issues

None at this time.

Summary Status

Milestones/deliverables/information for this reporting period:

- Contractors are working to complete punch list items associated with the solar panels and heating, ventilation and air conditioning (HVAC) control systems.

Planned milestones/deliverables/information for the next reporting period:

- Continuation of punch list work, building commissioning and contract close-out tasks.

Education Center

Planned milestones/deliverables/information for the next reporting period:

- This report will be suspended for three to four months, with a final report issued once all costs are recorded and LEED certification is completed.



Oregon Zoo Bond Project Status Report Polar Passage/Primate Forest/Rhino

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting

Sept. 13, 2017

Agenda item D-2

Project Title: Polar Passage/Primate Forest/Rhino	Project Manager: Jim Mitchell
Reporting Period #021/Status Date: August 24, 2017	Project Manager Phone: 503-914-6025
Architect/Engineering Design Consultant: CLR Design	Construction Manager/General Contractor: Lease Crutcher Lewis (LCL)
Polar Passage Project Description: The new polar bear habitat is needed to increase access to natural substrate; increase the efficiency of the water-filtration system; reduce temperatures; chill the pool water; and increase both land and pool space. Construct modern natural holding areas with better lighting and ventilation, allowing better care for the animals. Space requirements, water quality and housing conditions will meet or exceed the Manitoba Protocols established for zoo polar bears. New utilities will complete the system upgrade installed with previous bond-funded projects. Guest services will be enhanced at the new central plaza.	
Primate Forest/Rhino Project Description: The current schematic design demolishes the existing building (except for the newer Red Ape Reserve) and rebuilds on the current primate site for chimpanzees, orangutans and gibbons. The Metro Council approved the project scope modifications on March 16, 2017. Rhino habitat: Remove the hippo dump-and-fill pool, remove the barrier between the rhino/hippo habitats and re-grade both habitats for rhino use only.	

Status at a Glance

Status Item	On Track	Caution	Off-track
Budget	X		
Schedule and signoffs	X		
Deliverables	X		

LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

Design and Construction Schedule

START DATE		COMPLETION DATE	
ESTIMATED	CONTRACT	ESTIMATED	CONTRACT
05/2016	6/2016	06/2020	TBD

Project Budget and Expenditures

ORIGINAL BASELINE	REVISED BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$34,348,074	\$43,039,589*	\$1,000,415	\$43,039,589	\$0

*On Feb. 4, 2016, the Metro Council approved the bond team's recommendation to increase the Polar Passage project budget by \$2.6 million to cover escalation costs exceeding the original estimated escalation.

On March 16, 2017, the Metro Council allocated remaining resources and increased the Polar Passage project budget by \$3,248,334 and the Primate Forest/Rhino project budget by \$2,605,848.

On April 6, 2017, the Metro Council approved an exemption to competitive procurement by combining Polar Passage and Primate/Rhino projects under the existing design and Construction Management/General Contractor contracts to save an estimated \$1.3 million in construction costs. Project budgets and schedules have been combined.

In August 2017, the Nancy Parr estate donation of \$237,333 for Primate Forest was added to the project budget.

Critical Issues:

None at this time

Summary Status:

Milestones/deliverables/information items for this reporting period:

- The Oregon Zoo Foundation will provide a \$237,333 donation from the Nancy Parr Estate to be used exclusively to enhance the Primate Forest construction scopes of work. The project budget has been updated to reflect this.
- Design Workshop # 8 will be facilitated at the zoo from August 28 thru August 31. The workshop agenda will address Polar Passage, Primate Forest and rhino project and interpretive design.
- The 100 percent schematic design for the interpretive package for Polar Passage was issued by the consultant. Zoo staff reviewed and value engineered some of the items, and the interpretive package is now on budget based on the consultant's estimate.
- The Metro Council previously approved combining design and construction of three projects based on projected cost savings of more than \$1.3 million. Project budgets and schedules have been combined. This is the second report combining Polar Passage and Primate Forest/Rhino project status.

Planned milestones/deliverables/information for the next reporting period:

- Primate Forest is scheduled to reach 100 percent schematic design approximately September 15.
- When the Primate Forest and rhino reach 100 percent schematic design, they will be designed concurrently with Polar Passage.

Construction progress:

- Construction is estimated to start in spring 2018.



Oregon Zoo Bond Project Status Report Interpretive Experience

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting

Sept. 13, 2017

Agenda item D-3

Project Title: Interpretive Experience	Project Manager: Kate Giraud
Reporting Period #68/Status Date: August 25, 2017	Project Manager Phone: 503-548-2677
Project Description: Interpretive elements are the printed, graphical and electronic activities, experiences and signage in and around exhibits that provide mission-based communication to connect guests with the zoo's animals, mission and values. In addition to explaining information at exhibits, the interpretive experience will address campus orientation and wayfinding, branding, amenities, and the holistic guest experience.	

Status at a Glance

Status Item	On Track	Caution	Off-track
Budget	X		
Schedule and signoffs	X		
Deliverables	X		

LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

Design and Construction Schedule

START DATE		COMPLETION DATE	
ESTIMATED	CONTRACT	ESTIMATED	CONTRACT
2/27/12	3/12/12	4/26/19	12/31/19

Project Budget and Expenditures

ORIGINAL BASELINE	REVISED BASELINE	COSTS TO DATE	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$3,876,412	\$2,766,640*	\$2,501,240**	\$2,766,640	\$0

*Interpretive budgets were historically allocated and included with each major project budget. The program originally determined it would be best to track and manage Interpretives as a stand-alone project, and budgets were modified for this change.

As of January 2014, Interpretive budgets were reallocated back to the remaining projects (Education Center, Polar Bears and Primate).

In April 2017, the Interpretives budget was updated to reflect all additional funding sources from USFWS, OZF and the zoo.

**Project costs to date include production of condor interpretive videos paid for by a \$25,000 US Fish and Wildlife Service grant, an Elephant ID mobile app and Elephant Lands donation station paid for by a \$130,000 Oregon Zoo Foundation grant, and additional wayfinding scope paid for by \$146,993 from the zoo renewal and replacement fund.

Critical Issues

No critical issues to report for this period.

Summary Status

Milestones/deliverables/information for this reporting period:

- Campus wayfinding is one of the projects funded under the Interpretive Experience bond budget.
 - Ramsay Signs and Delta AV are working with Samsung on punch list items associated with the front entrance ticket booth monitors.
 - The Central Plaza wayfinding kiosk has been fabricated and will be stored in the zoo's gated storage area until 2019 when the Central Plaza is completed as part of the Polar Passage project. This is the final kiosk to be installed.

Planned milestones/deliverables/information for the next reporting period:

- Front entrance ticket booth punch list update



Oregon Zoo Bond Project Status Report Percent-for-Art

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting

Sept. 13, 2017

Agenda item D-4

Project Title: Percent-for-Art	Project Manager: Kate Giraud
Reporting Period #67/Status Date: August 25, 2017	Project Manager Phone: 503-548-2677
Project Description: Metro Council Resolution 11-4282 approved the recommendation to use the Percent-for-Art funds for zoo bond program programmatically rather than on a project-by-project basis. This enables a more strategic approach to the selection and installation of public art at the zoo and leverages the monies to greater effect for the public and the campus.	

Status at a Glance

Status Item	On Track	Caution	Off-track
Budget	X		
Schedule and signoffs	X		
Deliverables	X		

LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

Project Schedule

START DATE		COMPLETION DATE	
BASELINE	REVISED	BASELINE	REVISED
n/a	10/1/09	n/a	6/25/20

Project Budget and Expenditures

BUDGET BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$843,154*	\$611,571	\$843,154	\$0

*Budget baseline includes \$20,000 from an Oregon Cultural Trust grant and \$30,000 donated by the Oregon Zoo Foundation to help fund the Willard Martin Mosaic restoration and reinstallation efforts.

Critical Issues

None at this time.

Summary Status

Milestones/deliverables/information for this reporting period:

- Polar Passage commissioned artists, Veronica and Edwin Dam de Nogales, revised their melting polar bear sculpture and bear benches designs based on feedback from the Oregon Zoo Public Art Advisory Committee meeting from June 7, to address safety concerns and inhibit climbability.
- Zoo staff and the Regional Arts and Culture Council consultant Peggy Kendellen met with the Dam de Nogales artists via a teleconference meeting on Aug. 29. They reviewed the proposed art concept and locations, and agreed to a proposal to send to OZPAAC on Sept. 6.
- Zoo staff drafted a proposal for the reinstallation of the zoo's six Warren Iliff sculpture garden pieces on zoo grounds, and it is currently under review. The Iliff artworks were previously installed adjacent to the former Elephant Museum and temporarily displaced by construction.

Planned milestones/deliverables for the next reporting period:

- The next OZPAAC meeting is scheduled for September 6. The commissioned artists for Polar Passage will present an updated design concept and review potential locations for the art pieces. The artists will also present additional research they have done on aluminum as an adequate material for their sculptures.

Percent-for-Art Project Status Report

OZPAAC will be asked to approve the design concept and locations, and recommend approval to the Metro Council.



Oregon Zoo Bond Project Status Report Electrical Infrastructure

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting

Sept. 13, 2017

Agenda item D-5

Project Title: Zoo Electrical Infrastructure	Project Manager: John Sterbis						
Reporting Period #03/Status Date: August 28, 2017	Project Manager Phone: 503-525-4297						
Architect/Engineering Design Consultant: Various	Construction Manager/General Contractor: Various						
<p>Project Description: The Electrical Infrastructure project replaces two outdated emergency power generators and associated electrical infrastructure critical to servicing animal areas and supporting animal and guest safety. It includes six subprojects – each with its own scope, schedule and budget – that are being managed by zoo Facilities Management and paid with zoo bond funds, per a signed Memorandum of Understanding with the zoo bond program:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Lower Service Road Feeders</td> <td style="width: 50%;">4. Animal Nutrition Center Panel Replacement</td> </tr> <tr> <td>2. Roundhouse Automatic Transfer Switch</td> <td>5. Middle Service Road Feeders</td> </tr> <tr> <td>3. AfriCafé Panel Replacement</td> <td>6. Generator Replacement and DSG Upgrades</td> </tr> </table> <p>This project was added to the bond program by the Metro Council on March 16, 2017.</p>		1. Lower Service Road Feeders	4. Animal Nutrition Center Panel Replacement	2. Roundhouse Automatic Transfer Switch	5. Middle Service Road Feeders	3. AfriCafé Panel Replacement	6. Generator Replacement and DSG Upgrades
1. Lower Service Road Feeders	4. Animal Nutrition Center Panel Replacement						
2. Roundhouse Automatic Transfer Switch	5. Middle Service Road Feeders						
3. AfriCafé Panel Replacement	6. Generator Replacement and DSG Upgrades						

Status at a Glance

Status Item	On Track	Caution	Off-track
Budget	X		
Schedule and signoffs	X		
Deliverables	X		

LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

Design and Construction Schedule

START DATE		COMPLETION DATE	
ESTIMATED	CONTRACT	ESTIMATED	CONTRACT
9/1/16	various	06/01/18	NA

Project Budget and Expenditures

ORIGINAL BASELINE	REVISED BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$1,500,000	\$2,076,600*	\$417,290	\$1,902,347	(\$174,253)

*Project budget was updated July 2017 with \$576,600 in additional resources from Portland General Electric to fund upgrades to zoo generators for Dispatchable Service Generation participation.

Critical Issues

None at this time.

Summary Status

Milestones/deliverables/information for this reporting period:

- The contract with Portland General Electric for the Dispatchable Service Generation (DSG) partnership was sent to PGE for review.
- Replaced the electrical feeders that provide electricity to the lower portion of the zoo.
- Replaced the electrical panels in AfriCafé.
- Metro bid the work to replace the electrical service panel in the Animal Nutrition Center, and signed a contract with Frahler Electric.

Electrical Infrastructure

- Zoo leadership approved participation in a Dispatchable Service Generation (DSG) partnership with Portland General Electric. Control upgrades to two existing generators and one new generator will be paid for by PGE. PGE will perform routine maintenance and monthly load testing on the zoo generators for 10 years. PGE will link the generators to their operating system to access additional power when needed. The zoo will maintain access to the generators in the event of a power outage. The zoo will budget \$67,400 for owner upgrades needed; this funding will come from the electrical infrastructure zoo bond budget. PGE will pay the zoo \$576,600 for the control upgrades. Payment will be received in installments, with all payments provided by January 2019 at the latest. Up-front capital costs will be covered by unallocated Oregon Zoo Foundation funds in the bond program budget. The completion date for the Generator Replacement project has been revised to June 15, 2018, due to the added DSG scope and approval process.

The project design and engineering documents are at 90 percent complete.

Planned milestones/deliverables/information for the next reporting period:

- Middle Service Road Feeders – Develop timeline for replacement.
- AfriCafé Panel Replacement – Contractor to complete additional controls and punch list work.
- Animal Nutrition Center Panel Replacement – Construction is scheduled to begin Oct. 2. Contractor will work over weekends, and is scheduled to be complete before ZooLights in November.
- Generator Replacement – Finalize the contract with PGE for Dispatchable Service Generation (DSG) program construction. Finalize the design and engineering documents and advertise them for bid in late September. Construction is to occur in the winter and spring, 2017-2018.



Oregon Zoo Bond Program
 Project Status and Financial Information at a Glance
 Expenditures and Revenue through July 2017

Oregon Zoo Bond
 Citizens' Oversight
 Committee Meeting
 Sept. 13, 2017
 Agenda item E

Program Budgets and Expenditures						Project Budgets	Zoo Bond Fund Expenditures	Nonbond Fund Expenditures	Total Project Expenditures	Project Forecasted Total Expenditures
Construction Projects	Pre-Schematic Design	Design Development	Construction Docs	Contracting	Construction					
Veterinary Medical Center	Complete	Complete	Complete	Complete	Complete	\$ 9,464,299	\$ 8,840,329		\$ 8,840,329	\$ 8,840,329
Penguin Life Support System	Complete	Complete	Complete	Complete	Complete	\$ 1,800,000	\$ 1,762,250		\$ 1,762,250	\$ 1,762,250
Water Main Building	Complete	Complete	Complete	Complete	Complete	\$ 267,459	\$ 242,495		\$ 242,495	\$ 242,495
Elephant Lands	Complete	Complete	Complete	Complete	Complete	\$ 57,561,443	\$ 54,147,245	\$ 3,260,000	\$ 57,407,245	\$ 57,561,443
Condors of the Columbia	Complete	Complete	Complete	Complete	Complete	\$ 2,628,592	\$ 2,215,609		\$ 2,215,609	\$ 2,215,609
Remote Elephant Center					Project Eliminated	\$ 117,864	\$ 39,672	\$ 78,191	\$ 117,864	\$ 117,864
Education Center	% Complete	Complete	Complete	Complete	Complete	\$ 17,504,125	\$ 15,903,918	\$ 1,478,025	\$ 17,381,943	\$ 17,504,125
Polar Passage/Primate Forest /Rhino	Complete	PP 100% SD		Complete		\$ 43,039,589	\$ 1,000,415		\$ 1,000,415	\$ 43,039,589
	% Complete	PFR 50% SD				Note 2				
Electrical Infrastructure	% Complete				21%	\$ 2,076,600	\$ 417,290		\$ 417,290	\$ 1,974,000
Closeout Contingency	% Complete					\$ 1,000,000				\$ 1,000,000
Interpretives	Condors Interp.	Elephants Interp.	Wayfinding							
Program Interpretive Experience	Complete	Complete	95%			\$ 2,766,640	\$ 2,199,248	\$ 301,993	\$ 2,501,240	\$ 2,766,640
	% Complete									
Percent-for-Art	VMC Art	Art Program Planning	East Plaza Art	West Plaza Art	Central Plaza Art					
One-Percent-for-Art Requirement	Complete	Complete	Complete	Complete	20%	\$ 843,154	\$ 561,571	\$ 50,000	\$ 611,571	\$ 843,154
	% Complete									
Planning Projects	Proposals Submitted	Contract Award	Interim Reports	Final Deliverables	Close-out					
Comprehensive Capital Master Plan	Complete	Complete	Complete	Complete	Complete	\$ 1,850,000	\$ 1,691,504		\$ 1,691,504	\$ 1,691,504
Stormwater/ Wastewater Analysis	Complete	Complete	Complete	Complete	Complete	\$ 160,000	\$ 159,979		\$ 159,979	\$ 159,979
Stormwater Minor Projects & Campus Surv	Complete	Complete	Complete	Complete	Complete	\$ 386,797	\$ 386,797		\$ 386,797	\$ 386,797
Land Use Processes	Project Scope and Baselines	Technical Studies and Application	Public meetings	Submit CU MS to City for Approval	Land Use Approval Process					
Land Use – New CUMS	Complete	Complete	Complete	Complete	Complete	\$ 796,785	\$ 816,777		\$ 816,777	\$ 816,777
Land Use – Amended CUMS	Complete	Complete	Complete	Complete	Complete	\$ 110,429	\$ 142,617		\$ 142,617	\$ 142,617
Program Administration										
Program Administration, Metro Central Support and Bond Issuance						\$ 7,200,000	\$ 5,116,958		\$ 5,116,958	\$ 7,200,000
Unallocated Program Contingency										
Unallocated Program Contingency										\$ 1,594,323
Expenditure Totals							\$ 95,644,673	\$ 5,168,209	\$ 100,812,882	\$ 149,859,494

Program Resources	Expected Amount	Zoo Bond Fund Revenues Received	Nonbond Fund Revenues Received	Total Revenues Received/Issued	Funds Not Yet Received
General Obligation Bonds, premiums and interest	\$ 140,684,623	\$ 130,608,619		\$ 130,608,619	\$ 10,076,004
Oregon Zoo Foundation	\$ 6,918,000		\$ 6,018,000	\$ 6,018,000	\$ 900,000
Grants, donations, rebates and partner investments--Note 1	\$ 2,256,871		\$ 630,384	\$ 630,384	\$ 1,626,487
Resource Totals	\$ 149,859,494	\$ 130,608,619	\$ 6,648,384	\$ 137,257,003	\$ 12,602,491

Reports will show newly added items for two months' reports:

Note 1 - Includes \$50,862 Energy Trust of Oregon incentives for Education Center energy efficiency, \$2,500 ETO incentive for Polar Passage, and \$576,600 from Portland General Electric for Dispatchable Service Generation upgrades to generators.

Note 2 - The Nancy Parr estate donation of \$237,333 for the Primate Forest was added to the project budget in August 2017.



PROJECTS SCHEDULE
Oregon Zoo Bond Program
 As of Aug. 18, 2017

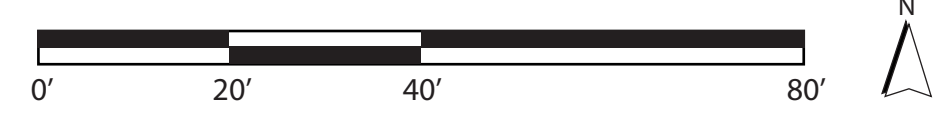
Oregon Zoo Bond Citizens'
 Oversight Committee Meeting
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Task Name	Start	Finish	2017				2018				2019					
			Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3		
Consolidated Bond Program Schedule	10/1/09	8/13/20														
Water Main Building	10/26/09	7/29/11														
Veterinary Medical Center	11/12/09	1/24/12														
Land Use Permits	3/16/10	1/28/13														
Comprehensive Capital Master Plan	6/2/10	11/3/11														
Penguinarium Filtration	11/1/10	2/29/12														
Condors of the Columbia	7/25/12	3/4/14														
Elephant Lands	11/7/11	12/7/15														
Percent for Art	10/1/09	6/25/20														
VMC Commissioned Art	10/1/09	1/24/12														
Art Conservation/Remove-Relocate Art	5/16/12	12/29/17														
Major Art Commission #1 (Elephant Lands)	5/13/13	9/30/15														
Major Art Commission #2 (Education Center)	4/1/14	11/30/16														
Major Art Commission #3 (Polar Passage)	3/1/16	6/25/20														
Interpretive Experience	3/19/12	4/26/19														
Interpretive Roadmap	3/19/12	9/30/12														
Condors of the Columbia Interpretives	6/14/12	3/7/14														
Elephant Lands Interpretives	6/25/12	11/13/15														
Wayfinding Design/Solicitation	3/17/14	12/31/15														
Wayfinding Construction/Install Pylons/4 Kiosks	1/2/16	6/28/17														
Wayfinding Install Central Plaza Kiosk; Post-construction	3/4/19	4/26/19														
Education Center	3/21/13	6/30/17														
Early Demolition	3/21/13	6/12/13														
RFP Design	1/21/14	4/18/14														
Design	4/21/14	9/11/15														
Construction	9/15/15	3/1/17														
Post Construction	3/2/17	6/30/17														
Polar Passage/Primate Forest/Rhino	2/9/16	8/13/20														
RFP Design	2/9/16	6/20/16														
Polar Passage Design	6/21/16	4/16/18														
Primate Forest/Rhino Design	11/17/16	4/16/18														
Construction	4/17/18	6/25/20														
Post Construction	6/26/20	8/13/20														
Electrical Infrastructure	9/23/14	6/15/18														

PRIMATE & POLAR BEAR PLAN

Schematic Design Draft

Oregon Zoo Bond
Citizens' Oversight
Committee Meeting
Sept. 13, 2017
Agenda item G



LEGEND

CIRCULATION

- Visitor Path
- Service Path / Parking

ANIMAL MANAGEMENT

- Exhibit
- Holding
- Off-Exhibit Yard

BUILDINGS & FACILITIES

- Visitor Amenity
- Exhibit Building
- Admin / Support

LANDSCAPE

- Buffer Vegetation
- Pools and Stream

PROGRAM

Headland Habitat	10,800 SF
Meadow Ridge Habitat	11,000 SF
Off-Exhibit Yard	3,600 SF
Maternity Yard	1,700 SF
LSS Building	3,800 SF
Holding Building	2,800 SF
Interpretive	1,100 SF
Maternity Holding	500 SF
Restroom	900 SF
Cafe	1,500 SF
Storage	1,900 SF
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New Chimpanzee Building	5,300 SF
Exg. Orangutan Holding Building	2,400 SF
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Existing Chimpanzee Habitat	9,500 SF
New Chimpanzee Habitat	4,300 SF
Existing Orang. & Gibbon Habitat	5,300 SF
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New View Shelter	900 SF

