



# POINT DEFIANCE ZOO & AQUARIUM

## Request For Qualifications For Architectural and Engineering Services

Arctic Tundra Exhibit Upgrade  
RFQ J2017-20

The Point Defiance Zoo & Aquarium (PDZA) will receive letters of interest and statements of qualifications from qualified architecture / engineering teams specializing in the area of zoo exhibit design. The work may include a predesign study, preparation of complete designs, construction documents, permitting, and assistance with bidding and construction administration of improvements to an existing Arctic Tundra exhibit.

**Statements of Qualification (SOQ) will be received** at the office of Planning & Development Department, Metro Parks Tacoma, 4702 S. 19<sup>th</sup> Street, Tacoma WA 98405 **until 1:00 p.m. on Friday July 28, 2017**. Qualifications received after the appointed time set for receipt will be returned unopened.

### **PDZA & the Metropolitan Park District of Tacoma**

PDZA is a 107-year-old organization and one of 224 North American zoological institutions accredited with the Association of Zoos and Aquariums (AZA). PDZA is a department of the Metropolitan Park District of Tacoma (Metro Parks Tacoma), an independent municipal government agency providing park and recreation services to the citizens of Tacoma. Metro Parks Tacoma is governed by a Board of elected Park Commissioners and cooperates with, but is independent of City of Tacoma municipal government.

### **Project Site**

Point Defiance Zoo & Aquarium (PDZA) occupies approximately 27 acres in Point Defiance Park, a 702-acre public park located in the north end of the City of Tacoma, Washington. The current Arctic Tundra exhibit occupies approximately 4.5 acres in the northern part of the Zoo. The focus of this project will be on the Polar Bear / Arctic Fox portion of the exhibit consisting of approximately 2.5 acres.

### **Background**

Polar Bears have been a part of Tacoma's animal collection since 1938, and have become the signature animal for PDZA and its messages and programming around climate change. In 1982, the Zoo opened an Arctic Tundra exhibit featuring polar bears, which quickly earned National attention. It was awarded the title of 'Best New Exhibit' from the Association of Zoos & Aquariums. Three bears initially inhabited that new exhibit, and it rapidly became a popular Tacoma attraction.

Over the past thirty years, the Arctic Tundra exhibit has continued to be one of the star attractions at PDZA. While standards for animal care have changed, the exhibit still provides an inspiring view of these charismatic animals. Their image has been the zoo logo for the past 26 years and has been used repeatedly in graphics and promotions. Later, because of their excellent reputation, PDZA was selected to house two bears that were confiscated by the Fish and Wildlife Service from a Mexican circus that was touring Puerto Rico in 2002.

#### PROJECT NEED

The Arctic Tundra exhibit remains much as designed in 1982. Not only is the exhibit showing signs of wear after over 35 years of heavy use, but also during that time knowledge concerning the care and survival of polar bears both in zoos and in the wild has changed greatly.

- Physical Deterioration: Continuous saltwater contact has taken a toll on viewing windows, caging, concrete and rebar. While much of the existing exhibit suffers from these corrosive effects, timely repair and corrective action can significantly lengthen the service life of those areas.
- Animal Care Specifications: The Association of Zoos and Aquariums (AZA) Polar Bear Species Survival Plan® has adopted a set of stringent specifications for polar bear care and exhibitry through the Polar Bear Animal Care Manual (ACM) – which is based on the Manitoba Polar Bear Protection Act (2002). The PDZA Polar Bear Exhibit does not meet many of these new specifications. Among other things, the ACM outlines increased space for adults and cub dens as well as the availability of natural substrate such as dirt or sand where an animal can dig. The minimum size and animal separation requirements will necessitate an increase in the space allocated to animal habitat. Given limited capital funds and these space requirements it is most likely that only two adult bears will be held at PDZA in the future.
- Ability to Respond to Need: Unless PDZA meets current specifications for holding of Polar Bears, PDZA will not likely to be able to house new animals. Neither will PDZA be able to respond to requests for help with stranded, orphan, or starving bears already becoming more common because of climate change.
- Water Quality Issues: The primary Life Support System (LSS) for the polar bear and Rocky Shores area is 30 years old, and will need to be improved with modern efficient equipment to meet the needs of these exhibits.
- On-Site Breeding Program: Because of the serious worldwide concern for survival of polar bears, facilities for an on-site breeding program are considered desirable for any new exhibit. Our existing exhibit facilities have not proven effective and are not adequate. PDZA would like a facility where polar bears can be bred.

- Impact of climate change: The polar bear is *the* iconic arctic species and is clearly being affected by arctic climate change. The value of this exhibit to telling the story of climate change in a manner that motivates visitor engagement around this issue cannot be underestimated.

## 2015 IMPLEMENTATION PLAN

Following passage of a capital bond program in Tacoma in 2014 PDZA retained the firm of EHDD to develop conceptual plans, cost estimates, and project schedules for three projects associated with Bond funding. The “Implementation Plan” was completed in March of 2015 and serves as a guide as PDZA carries out capital projects under the 2014 Tacoma Parks Capital Improvement Bond Program. A copy of the Implementation Plan is referenced at the end of this document.

- Concurrent with the development of the Implementation Plan, PDZA retained the Life Support Systems (LSS) engineering firm of TJP to conduct preliminary engineering studies overiewing all LSS systems at PDZA.
- The Arctic Tundra Exhibit improvements described in the 2015 Implementation Plan were ambitious, outlining a near doubling of the habitat and holding areas. As the capital program has progressed, it has become clear that a less ambitious upgrade of the existing exhibit is more in line with the resources available.

## Project Scope

As envisioned by PDZA, the reduced scope project will consist of upgrades to the existing Arctic Tundra Exhibit bringing it into compliance with the ACM for exhibiting polar bears, and further correcting physical and visual deficiencies. We would like the completed polar bear exhibit to be designed for holding two adult bears and to include dens and other features sufficient to allow breeding and birthing of cubs should a breeding pair of bears be located in our facility. The Basic Features described below will be provided. Should funding allow the Other Desired Features described below might be included.

## BASIC FEATURES

Specific elements of the project include:

- Arctic Tundra Exhibit: The size and design features of the current Arctic Tundra exhibit must be modified to meet the recommendations in the Association of Zoos and Aquariums (AZA) Polar Bear Animal Care Manual (2009), which are based on the standards outlined in the Manitoba Polar Bear Protection Act (2002). The renovated facility is to accommodate a single pair of adult animals in one exhibit, and have provisions for breeding and temporary rearing of cubs. The existing pool area is adequate but the existing overall size and substrate is not. An “off exhibit” space providing similar behavioral opportunities for the animals as the primary exhibit is required by the standards and is not provided in the current facility. As per the Animal Care Manual, each bear should have its own area for sleeping or temporary

holding and all areas should have shift facilities to permit safe cleaning, habitat maintenance or repair, or other separations.

- Polar Bear Containment: Modifications must be made to existing animal containment barriers as required to enhance the public viewing experience, meet AZA standards, and comply with PDZA animal curator requirements.
- Polar Bear Holding Building: Modification to the existing holding building and associated pools, caging, and facilities are required to meet AZA standards and to correct existing deficiencies including improved ventilation.
- Polar Bear Breeding: Upgrade or replacement of existing “cubbing dens” using state of the art science to provide appropriate facilities that improve the potential for successful polar bear breeding.
- Arctic Fox Exhibit: Restoration and enhancement of the existing arctic fox exhibit is needed. The exhibit and holding areas are not adequate and are difficult for keeper staff to access, and maintain.
- Public Viewing Building: Modifications and enhancements to the existing public viewing building are required, including roof repairs, viewing window repair or replacement, ADA modifications, and improvements to paint and finishes.
- Seawater Filtration: Modifications and improvements to the existing exhibit seawater facilities may be needed to support the new Arctic Tundra Exhibit as well as the adjacent Rocky Shores Exhibit. Treatment of discharge waters from the exhibits may also be required.
- Visitor Enhancements: Modifications and enhancements to the existing visitor pathways and viewing areas will be required including paving, viewing areas, exhibits, graphics, and landscaping.
- Message/Interpretation/Conservation Action: Graphics and interpretive enhancements that tell the story of climate change.

#### OTHER DESIRED FEATURES

To the extent that funding will allow, the following additional project features are desired as project enhancements:

1. Interpretive exhibits.
2. Integration of required art works into the project design. (See budget allocation for art).

#### **Professional Services Desired**

PDZA seeks to retain the services of a qualified team of professionals experienced in the design of live animal exhibits to provide a predesign study, which may lead to complete architectural and engineering (A&E) services for the improvement and expansion of the

existing Arctic Tundra Exhibit. The initial assignment will be to conduct a Predesign Study sufficient to establish a detailed project scope and budget. Following satisfactory completion of the Predesign Study PDZA may elect to amend the A&E Agreement to add any or all of the subsequent phases described below.

#### PREDESIGN STUDY SERVICES

The objective of the Predesign Study Phase will be to establish a reliable estimate of what features are achievable within the project budget and to assist in bringing the scope and budget into alignment. During the Predesign Study Phase, the A&E will utilize earlier work produced by the 2015 Implementation Plan, and work with PDZA to define the general type, size, and location of all improvements needed to expand the facility and bring it into compliance with prevailing standards, regulatory requirements, and budget as described above.

Specific elements of the Predesign Study include:

- A review of existing site conditions, documents, and past planning.
- A minimum of two working sessions with PDZA staff and others during the design process to assess existing conditions, review assumptions, and discuss alternative approaches and priorities.
- Conceptual architectural site plans, sections, and perspective drawings in sufficient detail to describe the general type, size, and location of all improvements.
- A tabular summary of proposed improvements demonstrating compliance with AZA requirements for all animal exhibits.
- A summary of estimated construction cost demonstrating the manner in which project funds are proposed to be used to maximum benefit in providing the Basic Features and Other Desired Features described above.
- A project schedule confirming the schedule provided herein or indicating proposed changes.
- A formal presentation of the Predesign Study results to PDZA and a Project Steering Committee.
- Hard and digital copies summarizing the Predesign Study Phase for use by PDZA staff in presenting the project to Stakeholders.

At the completion of the Predesign Study Phase, PDZA may request that the A&E prepare a proposal covering all remaining design services so that we can assess how those costs will affect the total project cost.

#### **Subsequent Services**

Upon completion of the Predesign Study phase, PDZA may request additional services either by amendment to the original agreement or through a subsequent agreement. Those services as presently envisioned to include the following:

- Schematic Design Phase Services
- Design Development Phase Services
- Construction Documents Phase Services
- Assistance with Bidding
- Construction Phase Services
- Project Close-Out

The above services will be defined in detail if and when authorized. In general, the nature of the services will be similar to those described in guidelines established by the State of Washington Department of General Administration for Public Works projects.

PDZA and Metro Parks assume no obligation to authorize any additional services beyond the Predesign Phase described above, and may terminate the contract at the conclusion of that work.

### **Coordination with Others**

The Consultant selected for this work will be expected to coordinate with other consultants providing services to PDZA and Metro Parks Tacoma related to the capital program. Those other consultants will include the following:

1. Project Permitting / Land Use Regulatory Agreement: Metro Parks Tacoma has completed a Development Regulatory Agreement (DRA) and SEPA / NEPA environmental evaluation for all planned improvements at Point Defiance Park. The DRA constitutes the primary land use approval by the City of Tacoma for this project. PDZA does not anticipate additional / supplemental SEPA and land use approval submissions as part of this project. The project design must be reviewed with the City of Tacoma for compliance with the Master Plan and DRA.
2. Seawater Supply & Discharge Systems: PDZA has retained the aquarium systems engineering consultant team of BCRA Architects of Tacoma and TJP of Imperial Beach, California to prepare plans and construction documents for improvements to the existing seawater supply system including intake and pumping facilities at the Point Defiance shoreline, permitting, and site distribution piping. Criteria for discharge waters from the exhibit have been established. The consultant selected for this work will coordinate its work with the Seawater Supply and Discharge designs as necessary to produce a complete and consistent system.
3. Pacific Seas Aquarium Construction: Turner Construction, as GC/CM is in the process of constructing a new aquarium on a nearby site. That project will utilize several shared utilities, with the Arctic Tundra Exhibit. Aquarium construction is intended to be complete by early 2018 with an opening to the public in mid-2018. Coordination with that project will be necessary.
4. Topographic Survey: A topographic survey in AutoCAD format of the PDZA site has been prepared previously and will be made available to the selected design

team. If additional detailed measurement and testing of existing exhibit conditions is required, it will be provided by PDZA.

5. **Geotechnical Investigations:** Some geotechnical information already exists and will be made available to the selected design team. If additional geotechnical review becomes necessary, it will be obtained by PDZA and provided to the consultant team. Soils will need to be tested for contamination during the design phase in order to determine if mitigation and removal is necessary.

**Project Time Frame**

The following preliminary project milestones have been established by PDZA:

- Initiation of a Professional Services Agreement July 2017
- Completion of Predesign Study January 2018
- Initiation of design phase services February 2018
- Completion of Schematic Design July 2018
- Decision regarding GC/CM August 2018
- Completion of Design Development October 2018
- Completion of Construction Documents January 2019
- Building Permit Submission January 2019
- Arctic Tundra Exhibit Closed by February 2019
- Construction Starts by April 2019
- Construction Complete & Exhibit Opening by March 2020

**Project Funding & Budget:**

**Project Budget:** The budget for the project is fixed and challenging: A Maximum Allowable Construction Cost (MACC) for the project is set at \$6,882,108.

**Planning Team Requirements**

The Consultant team selected to conduct this work must have a demonstrated background of experience in the architectural design and engineering of marine mammal exhibits and other live animal exhibits. Bear exhibit design experience is desirable. PDZA is specifically interested in accessing the highest quality expertise in the following areas:

- **Architectural Design:** The Arctic Tundra exhibit will be the last major Zoo project developed under the 2014 Capital Improvement Bond Program. Metro Parks Tacoma and the public expect a design that expresses public pride as well as sensitivity to these important animals and the surrounding site. The design team must have demonstrated experience with the design of zoological exhibits, and have familiarity with local building and life safety codes and their application to buildings occupied by the public.

- Sensitivity to Visitor Experience: The design team must demonstrate an ability to produce highly effective visitor experiences, with sensitivity to smooth flow of pedestrian traffic, visibility, accessibility, and interpretation at each exhibit. PDZA visitors should receive the “up close and personal” animal encounters for which our institution is known.
- Technical Exhibit Design Expertise: The design team we select must have a demonstrated depth of experience in the technical design of live animal exhibits and their life support systems. A clear understanding of keeper safety and animal husbandry requirements as well as the AZA ACM pertaining to polar bears is essential. The team should include engineering professionals who understand the design challenges associated with properly sizing and integrating mechanical systems with exhibits.
- Structural Engineering: The design team must include a structural engineering design consultant who can evaluate various design solutions for their safety, durability, and cost effectiveness.
- Exhibit Life Support Systems (LSS) Engineering: The design team we select must have a demonstrated depth of experience in the technical design of live animal exhibits and their life support systems. A clear understanding of keeper safety and animal husbandry requirements as well as the AZA ACM pertaining to polar bears is essential. The team should include engineering professionals who understand the design challenges associated with properly sizing and integrating mechanical systems with exhibits.
- Civil, Mechanical & Electrical Engineering: The selected team must include engineering professionals who can assess the relative strengths and weaknesses of site options on the basis of providing utility services and creating efficient and maintainable supporting systems. These individuals will be expected to work with Zoo staff to make material and equipment selections based on experience in the zoological exhibit industry. An important consideration will be the management of storm water in accordance with code requirements on this restricted site.
- Landscape Architecture & Site Design: The design team must include professionals experienced in the design of site improvements both within exhibits and public areas that support the visitor experience and blend the improvements with their setting at PDZA. The consultant will be called on to work with PDZA horticultural staff in developing plans for plantings, irrigation systems, and site features. Portions of the landscape work may be constructed by the Owner.

**Consultants will be Selected Based on the Following Criteria:**

Metro Parks Tacoma will convene a review panel. Qualifications submittals will be



reviewed based upon the related experience/qualifications of the project team and key staff, record of past performance, and the demonstrated ability to meet the objectives outlined in the Scope of Work within the estimated timeframe. Interviews will be requested of the top ranked design teams by the review panel.

<b><u>Criteria</u></b>	<b><u>Points</u></b>
Project Understanding and Overall Approach	0-35
Related Experience of Project Team	0-30
Qualifications/Experience of Project Manager and Key Staff	0-10
References/Past Experience with Similar Project	0-15
Ability to provide the services within the project time frame	0-10
<b>Maximum Points</b>	<b>100</b>

Any firm failing to submit information in accordance with the procedures set forth in the RFQ may be subject to disqualification. Metro Parks Tacoma reserves the right, at its sole discretion, to waive immaterial irregularities contained in the RFQ. Metro Parks Tacoma reserves the right to reject any and all proposals at any time, without penalty. Metro Parks Tacoma reserves the right to refrain from contracting with any respondent.

**Submittals**

Letters of Interest and Statements of Qualifications will be received until 1:00 PM on Friday, 07/28/2017, and should be delivered to:

Fred Ramey  
 Tammy Maines  
 Metro Parks Tacoma  
 4702 S. 19<sup>th</sup> Street  
 Tacoma, WA 98405

This is a Request for Qualifications only and detailed project proposals are not desired. Statements of Interest and Qualifications should be no longer than 25 pages and should include the following:

- A letter of interest from the prime firm, signed by the principal professional intended to lead the design effort. The letter should indicate the availability of all members of the team to conduct the services within the schedule constraints established by PDZA.

- Identification of key firms and individuals proposed to make up your design team. Based on your understanding of the project, include an explanation of how this team will be organized and managed.
- Background resumes demonstrating the experience of key professionals making up the proposed team.
- Descriptions of successful projects of a similar nature completed by your team members, including their locations, and client contact information that PDZA may use as a reference.

Please provide one electronic copy in PDF format, and two bound copies of the above information for use by members of our consultant selection committee. Following an evaluation of the SOQ's received, the team(s) considered to be the most qualified may be requested to participate in an additional proposal / interview process. No further action beyond submission of the above information is required at this time.

**Additional Information & Documents**

Additional information for prospective consultants can be found at the referenced web sites below:

- General information on PDZA including a description of the 2014 Capital Bond Program can be obtained at <http://www.pdza.org/>
- General information about Metro Parks Tacoma can be found at <https://www.metroparkstacoma.org/>

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