



## CLEVELAND METROPARKS ZOO | ASIAN HIGHLANDS CLEVELAND, OHIO

### PROJECT DESCRIPTION

AMHigley recently served as Construction Manager at Risk for the Asian Highlands exhibit at the Cleveland Metroparks Zoo. This \$5.2M project features Snow Leopards, Amur Leopards, Red Panda, and Takin. The new themed holding and conservation building is constructed of timber framing, masonry with custom precast details, and includes 30' of viewing glass. Each pane of glass is made up of (3) layers of 3/8" glass with Iconoclastic Interlayer. The conservation area includes custom interactives and AV systems to educate and entertain visitors. The Leopard Holding area features separate secure containment areas for Snow Leopards and Amur Leopards with separate HVAC systems. Custom overhead shifts were fabricated to move Leopards from the outdoor yards, overhead to two front yards. Leopards can lay in the overhead "moongate" over top of the visitor path. The exhibit features (4) Leopard yards surrounding the holding building. Exhibit yards have custom built structures to allow the Leopards to jump and climb. Exhibit yards are fully enclosed in hand-woven stainless-steel mesh. Two exhibit yards also feature caves that are cooled utilizing a chilled water system pumped through the cave structure. A separate Red Panda holding building was constructed with direct access to the Red Panda yard. The yard is densely planted, includes climbing structures, as well as a custom fabricated log that the Red Pandas can nest in. The log is also cooled utilizing the chilled water system. The project completed in June 2018.

### PROJECT ACHIEVEMENTS

- AMHigley phased the project approvals into (2) GMPs to allow for an accelerated start to clearing, sitework, and foundations, while other project details were finalized.
- AMHigley Value Engineered the two Leopard caves to be cast-in-place structures with stacked boulders and cut timbers to create a nature look and could be completed using local labor, in lieu of creating the caves using shotcrete by a specialty theming contractor. This saved approximately \$100,000.
- AMHigley Value Engineered the chiller system for cooling the Leopard Caves, saving approximately \$150,000. Originally specified as a heated and chilled water system housed in the Leopard Holding Building and serving both the caves and a heated floor system in the conservation area, this was revised to be separate systems and relocated the chiller system to a more optimal location to reduce cost as well as keep chilled water lines out of the animal habitats.
- AMHigley proposed multiple options for the roofing system to provide the desired look. The selected roof system is a composite barreled tile in dark grey, mimicking tile used on traditional Asian structures, but costing approximate \$100,000 less, and more maintenance friendly, than clay tile options.
- AMHigley assisted the design team with designing the building roof framing to create the desired roof flares that are typical of traditional Asian structures.
- All Climbing Structures were built utilizing trees that were cut down on the site during clearing for the project. These trees were salvaged, milled to custom specs, kiln dried, and custom built in the field. Installers worked directly with the Zoo Keeper Staff to ensure platforms and ramps were built to maximize Leopard use and to ensure views were maintained from the guest viewing areas.

### CLIENT

Cleveland Metroparks  
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### ARCHITECT

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### SIZE

35,400 GSF

### CONSTRUCTION VALUE

\$5.2 Million

### COMPLETION DATE

June 2018



