

SEQUOIA AND KINGS CANYONS NATIONAL PARKS COMPUTER-GENERATED ILLUSTRATIONS

1. BACKGROUND

The General Sherman Tree, the largest living thing in the world by volume is located in the Giant Forest Sequoia grove in Sequoia National Park. A series of twenty-three wayside exhibits are planned for installation in and around the Sherman Tree area. Two exhibits focus specifically on the Sherman Tree interpreting the tree's impressive measurements. The artwork specified in this task order will be used to help illustrate the tree in detail.

2. PURPOSE

The purpose of this order is to create one original three-dimensional piece of art of the General Sherman Tree. The artwork will illustrate in detail the many aspects of the tree's monumental statistics in three-dimensional transparent relief. Visitors will be able to decipher many statistics including, diameter, weight, circumference, and height.

3. SCOPE OF WORK

In accordance with the terms and conditions of the above-reference contract, the contractor shall provide all labor, equipment, materials, and services necessary to create one full-color three-dimensional (3-D) illustration.

The artwork shall be rendered in full three-dimension with the ability to rotate the tree at any angle and from any position. Although a 2D view will be chosen and rendered, full 3-D is required for possible future uses including print, multimedia, or web applications.

The mapping of the tree in 3-D space shall be created from government provided photographs of the tree. An exact replica of the tree is not required. Close approximation of the larger features such as the largest branch or the distinct shape of the snag top shall be rendered to match visually.

The look of the tree shall closely resemble photo-realism. Three-dimensional textures and lighting shall be used to create a realistic look and feel that matches the Sequoia Tree's red bark and course texture. The needles of the tree can be generically applied and cones will not be required.

No additional elements are required in the illustration including background or additional trees.

A. Dissecting the Tree

Once the tree has been created in three-dimension, the tree shall be dissected to diagram the trees impressive statistics. With the use of transparency, lighting, and other artistic techniques the following elements shall be depicted:

Diameter: 36.5 ft (11 m)

Circumference: 103 ft (31 m)

Height: 275 ft (84 m)

Volume: 52,500 cubic feet (1,486,635 liters)

Weight: 1385 tons (1256 metric tons)

Age: 2,200 years old

Largest Branch: 6.8 feet diameter (2.1 meters)

Diameter at 180 feet (about 2/3 up the tree): 13.7 ft (55 m)

The artist shall make recommendations on how each element will be incorporated and highlighted on the tree. The goal of the illustration is to visually present each element of information using the tree as the canvas. A sample concept is provided. (See Attachment A.) Other elements maybe be introduced but must be kept to the minimum. The illustration will be used on a wayside exhibit that includes text, a chart, and two smaller illustrations. (See Attachment B) In the concept provided, a sapling is used to represent age and a person walking around the tree is introduced to illustrate the circumference.

Labels shall be added separately in a vector program such a Adobe Illustrator or InDesign. They shall not be rendered into the 3-D scene unless an accepted recommendation by the contractor warrants the use of 3-dimensional type.

B. Size

The final illustration shall be rendered to fill a space equal to 20-inches wide by 22.5-inches high at a resolution of 200dpi in RGB color.

C. Scale and the Wayside

To make best use of scale with an extremely vertical element like the General Sherman Tree, the angle of view shall be rendered as slightly oblique. The foreshortening shall compress the tree and better fill the area designated for the illustration.

4. **DELIVERABLES**

The contractor shall submit all work in stages for the Contracting Officer's Representative (COR) review and approval before proceeding to the next phase. Those review stages are specific to presentation and content as follows:

- A. **Preliminary sketch:** either hand drawn or digitally created in 2D that represents artist's recommendations and concept, delivered as a JPG file.
- B. **Wireframe model with sample textures and color:** 3D native file or Quicktime fly-through showing the three-dimensionality of the work sample areas rendered with full texture and color.
- C. **Final artwork:** HI-RES full-scale digital rendered file at 200 dpi (RGB colorspace) and 3D native file.

5. **TRAVEL**

Not Applicable.

6. **TIME FOR COMPLETION**

All work, including review and approval, shall be completed on or before June 30, 2007 in accordance with the following:

NOT LATER THAN

- | | |
|---|----------------|
| A. Submission of the preliminary sketch. | March 31, 2007 |
| B. Submission of the wireframe model with sample texture and color. | April 25, 2007 |
| C. Submission of the final artwork. | June 15, 2007 |

7. **REVIEW AND APPROVAL**

The Contracting Officer's Representative (COR) will notify the contractor, in writing, of approval or rejection citing any additions, corrections, or suggestions to the work within 15 calendar days. Any additions or corrections shall be completed and returned to the government with 15 calendar days.

In the event that the government delays comments beyond the period specified, the contractor shall be entitled to a day-for-day extension in the deliverable completion dates.

8. **CONTRACTING OFFICER'S REPRESENTATIVE** for the purpose of this order is:

Chad Beale
Visual Information Specialist
(304) 535-6451

9. **GOVERNMENT-FURNISHED PROPERTY**

The government will furnish the contractor with digital data on CD-ROM and hard copy maps. Upon completion and acceptance of all work the contractor shall return all materials to the COR.

10. **PAYMENT SCHEDULE**

Upon completion and acceptance of all work and receipt of a proper invoice, the contractor will be paid a firm-fixed-price of \$_____, in accordance with the following schedule:

- A. Upon completion and inspection of the sketch. \$_____
- B. Upon submission of final rendered art. \$_____

11. **ATTACHMENTS**

The following attachments are incorporated into this order:

CD-ROM with the following information:

- Conceptual Sketch
- Sherman Tree Wayside Exhibit
- Sherman Tree photo references
- Other Sequoia Illustrations
- Sherman Tree Area Proposed Wayside Concept Plan
- Original Wayside Thumbnail