

Attachment B

**LIGHTFIELD**

for

THE PASADENA CENTER

by

HANS PETER KUHN

FINAL ART PLAN  
December 2008

Hans Peter Kuhn

**LIGHTFIELD**

Final Art Plan

**Description of Fabrication and Installation**

"Lightfield" is an array of twenty-five illuminated, polycarbonate tubes that project vertically from a raised granite base. The base is approximately 20" high and is approximately 15' x 38' in plan, with matching granite top and concrete sides. The illuminated tubes will project from the granite about five feet. Below the granite top of the base the illuminated tubes will be mounted on a two-axis swiveling base that will allow the tube to move and rotate in a conic fashion. The motion of the tubes will be remotely controlled by computer-driven servos to allow the Artist to program the motion and orientation of each tube independently. The tubes will be weighted and balanced in such a manner that they return to a vertical/plumb position when not in motion. The servos may also be programmed to disengage to allow the tubes sway in the wind.

All of the electrical power at the artwork will be low voltage. It will be directed through conduit from an electrical closet in the adjacent building. The electrical closet will house the circuit breaker panel, low voltage transformers for the illuminate tubes and servos, the servo controllers and computer.

**Fabrication and Installation Schedule and Budget**

1. Preliminary design and prototyping: Includes research and development of concept, fabrication of initial prototypes, generation of initial drawings, and coordination with the City of Pasadena, Hans Peter Kuhn, DMJM Management, and Fentress Architects.  
Budget: \$20,000.00  
Estimated Duration: Completed
2. Contract signed
3. Construction of concrete base including installation of electrical conduit.  
Provided by City of Pasadena's Contractor
4. Generation of final design, engineer stamped shop drawings, and fabrication of developed prototype.  
Budget: \$25,000.00 (\$5000 increase from 1/22/08)  
Estimated Duration: 3 months
5. Fabrication of 25 kinetic light tube units, including integration of light elements and servo-actuators.  
Budget: \$167,000.00 (\$7000 increase from 1/22/08)  
Estimated Duration: 5 months

6. Fabrication of stainless steel frame (to support granite and provide a matrix for the kinetic light tubes).  
Budget: \$65,000.00 (\$5000 increase from 1/22/08)  
Estimated Duration: 3 months
7. On site installation of stainless steel frame, kinetic light tube units, and associated electrical wiring and components.  
Budget: \$25,000.00 (\$5000 increase from 1/22/08)  
Estimated Duration: 2 months
8. Fabrication and Installation of granite surface.  
Budget: \$52,000.00  
Estimated Duration: 1 month
9. Programming of servo controllers, fine tuning of light tube movement.  
Budget: \$20,000.00  
Estimated Duration: 1 month

Note: Some of the above time frames will overlap one another to some degree.

**Total Fabrication Budget: \$374,000.00**

Original Fabrication budget = \$360,000

Total increase of \$14,000

10. Hans Peter Kuhn design and consultation.  
Budget: \$100,000  
(To be paid to Hans Peter Kuhn by the City of Pasadena)
11. Travel and contingency.  
Budget: \$40,000.00

**Total Project Budget: \$514,000.00**

**Proposed Maintenance and Conservation**

As the led lights intended for use in "Lightfield" have an extremely long life, the only regular maintenance likely to be required is cleaning. Removal of any leaves or other debris that may accumulate on the granite surface can be accomplished by using a leaf blower, thus avoiding any direct contact with the work. This work should be performed regularly, as excessive collection of debris could adversely effect the movement of the kinetic elements.

Should the surface of the granite itself require cleaning, this can be done using a mild detergent and water, along with a window washing pole. While the granite surface of the piece will be engineered with the possibility of people walking on it in mind, this should be avoided if possible.

The polycarbonate tubes can be easily cleaned using an appropriate plastic cleaning solution, such as "Brilliance." Under no circumstances should the polycarbonate material be cleaned with a glass cleaning solution or anything that contains ammonia. As this process will necessarily involve walking on the granite surface, and handling the polycarbonate tubes, Knack Studio recommends that only a suitable conservation technician, who has been instructed by Knack Studio, perform the work. In the event a servo-actuator requires repair or replacement, or of any other electrical failure, repair should be performed by Knack Studio. Almost all the individual elements of "Lightfield" will be easily available "off the shelf," should replacement of any part of the piece be required. Please contact Knack Studio in the event this should become necessary.

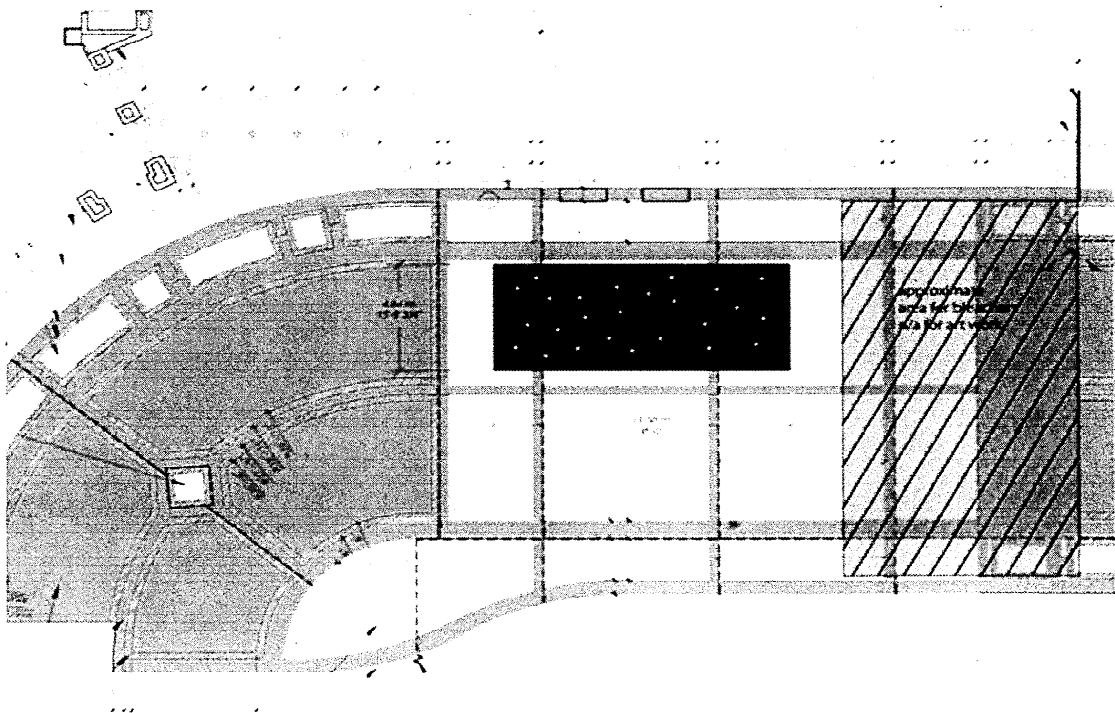
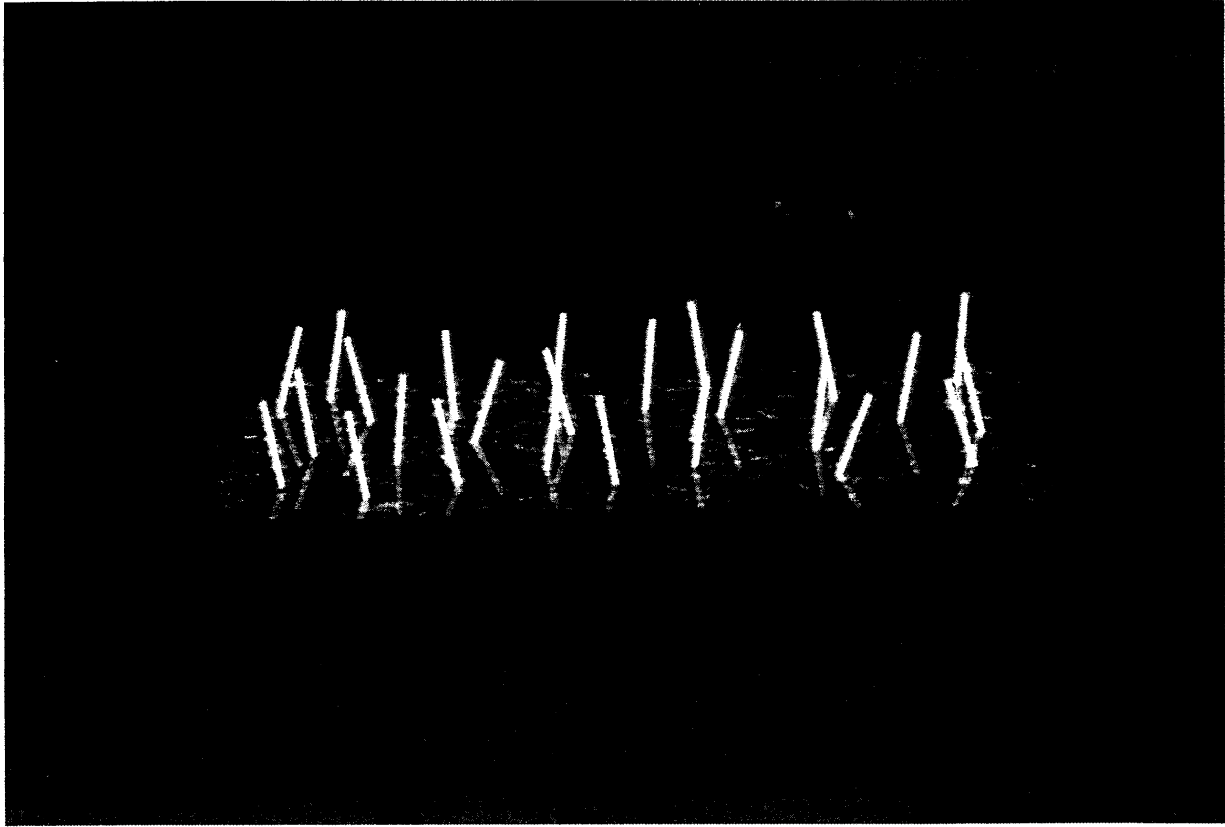
### **Potential liability issues**

Although nothing can stop a determined vandal, Knack Studio intends to engineer "Lightfield" in such a way that it is difficult to damage, and relatively easy to repair in event damage should occur. Those components that are most vulnerable to direct contact are the granite surface of the piece and the polycarbonate tubes. The use of granite in the artwork should be no more problematic than any other granite surfaces found throughout the City of Pasadena. Although it is possible to damage granite using a glass cutter, or acid, overall it is an extremely hard material that is difficult to scratch or shatter.

The polycarbonate tubes are not bullet proof, but polycarbonate is a material that has been developed with toughness specifically in mind. While it looks like glass, polycarbonate has a very high impact strength and good chemical resistance. It does not shatter like glass, yet has high rigidity. It is often described as having the clarity of glass but the impact strength of metal. That said, it is still Knack Studio's intention to engineer the piece in such a way that damage to the polycarbonate tubes, and the underlying mechanical elements, can be mitigated.

Once work is complete, Knack Studio will provide the relevant authority with three copies of a comprehensive maintenance manual.

Hans Peter Kuhn  
Final Design of Installation: Lightfield  
Pasadena Center



Hans Peter Kuhn

Resume

Cammel Laird, Liverpool (UK) /// 2006 /// Liverpool Biennial International 06 /// \$ 170,000

Wirtualny most na Wisle /// Swietokrzyski Bridge Warsaw (PL) /// 2006 /// German-Polish Year /// \$ 45,000

The Frozen Torchlight Parade /// Munkemosepark, Odense (DK) /// 2005 /// The Kingdom of Denmark & The Bikuben Foundation, Odense Bys Kunstfonds /// \$ 210,000

true colors /// Spreekarree Berlin (D) /// 2005 /// EnBW - Energie Baden-Württemberg /// \$ 145,000 /// (p)

Heiersturm /// Heiersturm, Paderborn (D) /// 2003 /// The City of Paderborn, State of Northrhine-Westfalia /// \$ 55,000 /// (p)

Lichterfeld F 60 /// Lichterfeld, Brandenburg (D) /// 2003 /// The Governor of the State of Brandenburg (D) /// \$ 850,000 /// (p)

Neues Rathaus /// City Hall Kiel (D) /// 2001 /// The City of Kiel (D) /// \$ 30,000

Klangremise /// Federal Garden Show Potsdam (D) /// 2003 /// The Federal Garden Show Potsdam (D) /// \$ 150,000

Marzahn /// Roofs of 43 houses in Marzahn - part of Berlin (D) /// 1999 /// Wohnungsbaugesellschaft Marzahn (Owner of the houses), BEWAG Berlin /// \$ 230,00

Noch Ohne Titel /// Neue Nationalgalerie Berlin (D) /// 1999 /// Nationalgalerie - Stiftung Preußischer Kulturbesitz, Bundesrepublik Deutschland /// \$ 40,000

LICHT /// World Cultural Heritage Voelklinger Huette, Voelklingen (D) /// 1999 /// The Governor of the State of Saarland (D) /// \$ 430,000 /// (p)

Potsdamer Platz /// Potsdamer Platz, Berlin (D) /// 1997 /// debis (Daimler-Chrysler), BEWAG, Partner fuer Berlin /// \$ 55,000

The Pier /// Pier 32, New York City (USA) /// 1996 /// Goethe Institute New York, cultural institution of the Foreign Office of the Federal Republik of Germany /// \$ 110,000

Puente de Sonido /// Bridge over Nervion River, Bilbao (E) /// Carta Blanco, Bilbao (E) /// \$ 25,000

Achtundacht /// Abandoned Railwaystation Westkreuz, Berlin (D) /// 1988 /// European Cultural Capital Berlin 88 /// \$ 10.000

## B Awards

Contractworld Award for innovative architectural concepts for "Salon du Livre" /// 2002

ADAM Award in Gold for "Salon du Livre" /// 2001

Merit Award Society for Environmental Graphic Design for "The Pier" /// 1996

Golden Lion of the Venice Biennale 1993 (w/Robert Wilson) /// 1993

Bessie Award, New York for "Suspect Terrain" /// 1990

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## C Solo Exhibitions (Selection)

work title /// location /// year

Frozen Heat - Hans Peter Kuhn /// The Tokushima Modern Art Museum, Tokushima, (J) /// 2007

Inde-Ude (Inside - Outside) /// Brandt's Kunsthallen, Odense (DK) /// 2005

works with sound /// Galleria e/static, Torino (I) /// 2004

Klanginstallationen /// GalerieVostell Berlin (D) /// 2003

Echtzeit 24 /// IndustrieKultur Saar, Göttelborn (D) /// 2003

W.E.SOFA /// Niederösterreichisches Landesmuseum St.Pölten (A) // 2003

Raster/ Landschaft /// Singuhr Hörgalerie, Parochialkirche Berlin (D) /// 2001

Salon du Livre /// Paris Book Fair - German Pavillon, Paris (F) /// 2001

Aquarium /// Klangkunstforum Berlin (D) /// 2000

Freiheitsglocke /// Rathaus Schöneberg Berlin (D) /// 2000

LICHT UND KLANG /// Stadtgalerie Saarbrücken (D) /// 2000

Tricolor /// Gallery Metronom, Barcelona (E) /// 1998

Blue /// Ormeau Bath Gallery /// Belfast (Northern Ireland) /// 1997

Three Works /// Kamakura Gallery Tokyo (J) /// 1996

Estacionamente Brasilia /// Soundscapeproject Brasilia, (Brazil) /// 1994

Memory Loss /// Venice Biennale Venice (I) with Robert Wilson /// 1993

Five Floors /// AngelSquare - Artangel London (UK) /// 1992



Mr.Bojangles Memory - og son of fire (w/R.Wilson) /// Centre Pompidou Paris (F) /// 1991

The Night Before The Day (w/R.Wilson) /// Boston Museum of Fine Art, Boston (USA)/// 1991

Fassungslos /// Galerie Laden fuer Nichts, Berlin (D) /// 1988

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D Group Shows (Selection)  
work title /// location /// year

Sonambiente 06 /// Berlin (D) /// 2006

Lichtkunst aus Kunstlicht /// ZKM Karlsruhe (D) /// 2005

Constellations @ Artissima 12 /// Torino (I) /// 2005

Lydbilleder VII /// Mesum for Samtidskunst, Roskilde (DK) /// 2004

Festival International d'Art Video , Casablanca (Maroc) /// 2004

Power of Art /// Hyogo Prefectural Museum of Art, Kobe (J) /// 2002

Visual Sound - Part 2 /// Mattress Factory, Pittsburgh (USA) /// 2001

Festival of Vision - Berlin in Hongkong /// Hongkong (China) /// 2000

2000 1/2 - going forward, looking back /// Seattle Art Museum, Seattle (USA) /// 2000

Das Szenische Auge /// IFA Berlin (D) and worldwide tour /// 1996

Sonambiente /// Berlin (D) /// 1996

SoundArt 95 /// Hannover (D) 1995

Venice Biennale (w/R.Wilson) /// Venice (I) /// 1993

Ars Electronica /// Linz (A) /// 1988

Attachment C

**THINKING CAPS**

for

THE PASADENA CENTER

by

DENNIS OPPENHEIM

FINAL ART PLAN  
December 2008

Thinking Caps: Dennis Oppenheim

Final Design

Cultural Affairs Division and the Arts and Culture Commission, Pasadena,  
California

Artist's statement:

Thinking Cap consists of three hats; a rain hat, a sun hat and a conductor's cap in an architectural scale, positioned to form an enclosure. Each hat functions as a projection surface for abstract images representing thought.

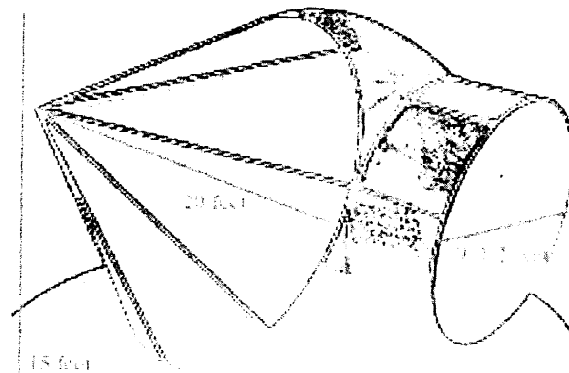
Using imagery within a large-scale artwork brings in a flood of associations, all strongly visual and with rich performative aspects.

Thinking cap brings to mind a magical object, following from the desire to "put on a cap... end up with an idea..."

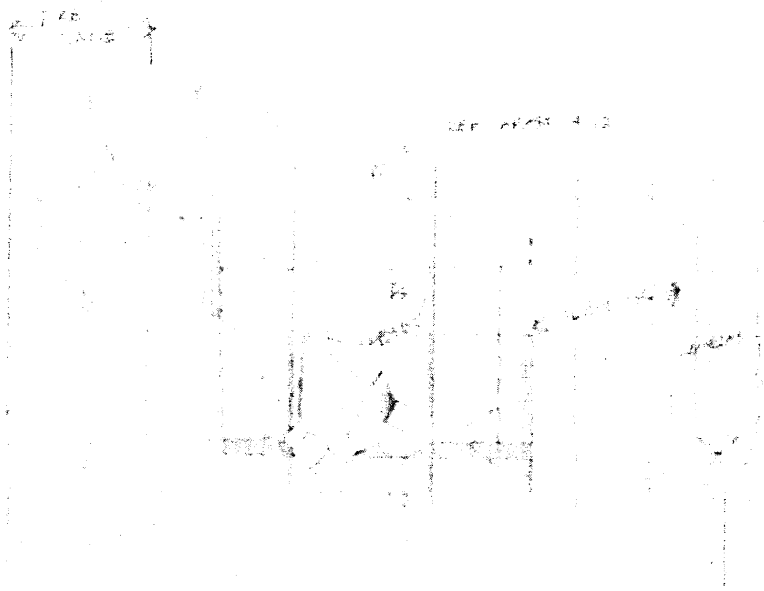
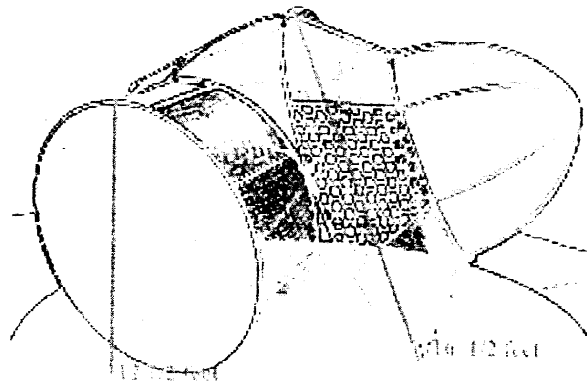
The "idea" here is performance, like dance. Projections taking place on the hats allow the structures to house thought, as well as to producing it. Elevating the mental dynamic to an architectural scale makes experiencing the work engaging to an architectural sensory system, conveying the notion that architecture is a kind of armature to create and hold ideas. In this way the sculpture outside the Pasadena Center reflects what is ongoing inside the buildings.

**DENNIS OPPENHEIM 54 FRANKLIN STREET 6 FL  
NEW YORK, NEW YORK 10013  
TEL 212 962 0178 FAX 212 587 3314  
email: dennisoppenheim@earthlink.net**

Size and Location:

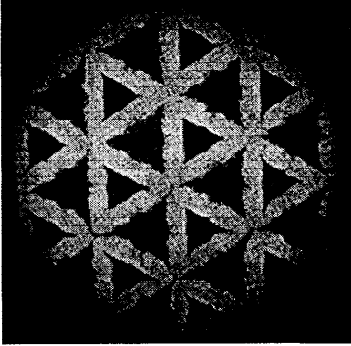
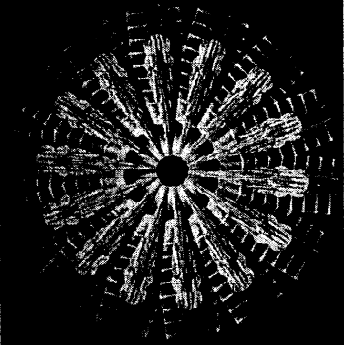
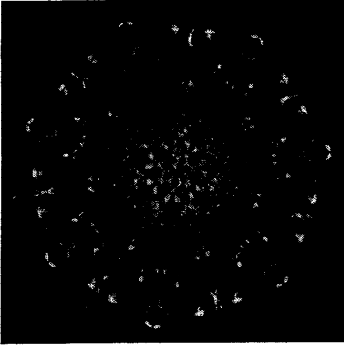


DENNIS OPPENHEIM 54 FRANKLIN STREET 6 FL  
NEW YORK, NEW YORK 10013  
TEL 212 962 0178 FAX 212 587 3314  
email: [dennisoppenheim@earthlink.net](mailto:dennisoppenheim@earthlink.net)



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# Sample images for projections



Materials: Structural steel, galvanized and or powder coated, punch plate, perforated metal and grating, Lexan\*, pattern projectors\*

Potential liabilities:

As design proceeds care will be taken to avoid opportunities for person(s) to get a toe- hold or otherwise grasp as a prelude to climbing the work.

We have begun discussions with the City of Pasadena on ways to conform to to disability and accessibility requirements. A first response is that providing a 48" wide x 80" high path through the piece and using 'domes' or tactile warning strips around the piece would be acceptable.

Maintenance and conservation:

The sculpture should be kept clean from dirt, grime and bird droppings. Cleaning should be semi annual. Special care should be taken in cleaning the Lexan panels using only products specifically made for cleaning transparent acrylic. Cleaning agents should be nonabrasive. The projectors uses a 150-watt halide lamp which has a 12,000 hr. lamp life, thereafter they should be replaced.

In terms of long term maintenance, any rust as soon as it appears should be protected, i.e. cold galvanizing.

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NEW YORK, NEW YORK 10013  
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email: dennisoppenheim@earthlink.net**



Installation specifications:

Foundation designs will be completed in July, 2008

General contractor will be commissioned to pour foundations prior to scheduled installation dates.

The three central elements of " Thinking Caps" will be fabricated in Sun Valley, California by La Paloma Fine Art Inc. and transported to the site on wide load flat bed trucks. Cranes and other lifting equipment will be used to install on foundations. There may be some on site welding.

La Paloma Fine Art Inc. is an art fabrication company which has fabricated my work for the past ten years. They are a full service company and will follow the project from design to fabrication and installation. I will make frequent trip to oversee the fabrication. Any committee or other professional can also arrange to view the work as it progresses. La Paloma works with S. B. Barnes, a structural engineer, prior to issuing shop drawings. They are a full service steel shop and can use water jet equipment to perforate steel plate, as per the artist's drawing. The general method of construction will be galvanized welded steel. Colored panels will be fit inside steel frames, size will be limited so that panels can be easily replaced in the event of damage. Panels will be bolted to frames on site.

Installation will take place over a five days week, access to the site at all times during this period will be requested.

**DENNIS OPPENHEIM 54 FRANKLIN STREET 6 FL  
NEW YORK, NEW YORK 10013  
TEL 212 962 0178 FAX 212 587 3314  
email: dennisoppenheim@earthlink.net**

Final Design Approval: January 2009

Structural Drawings complete: 4 months

Fabrication: 4 months

Installation: 2-3 weeks  
Includes video image projection testing/setup

**DENNIS OPPENHEIM 54 FRANKLIN STREET 6 FL  
NEW YORK, NEW YORK 10013  
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email: dennisoppenheim@earthlink.net**

# Preliminary Budget

Preliminary design, design	10,000.
Engineering, shop drawings	15,000.
Fabrication	100,000.
Transportation	3,000.
Installation	15,000.
Image Projectors	10,000.
Production of images	2,000.
Photography	5,000.
Insurance	5,000.
Correspondence	2,000.
Travel	3,000.
Artist Fee	30,000.
TOTAL	200,000.

DENNIS OPPENHEIM  
54 FRANKLIN STREET, 6th FLOOR  
NEW YORK, NY 10013 USA  
TEL 212 962 0178 FAX 212 587 3314  
email: dennisoppenheim@earthlink.net

Selected Bibliography: DENNIS OPPENHEIM

Born in Electric City, Washington, 1938. Lives and works in New York City. Educated at the School of Arts and Crafts, Oakland, California (B.F.A., 1965) and Stanford University, Palo Alto, California (M.F.A., 1965).

SELECTED ONE PERSON EXHIBITIONS

Volume!, Rome, Italy, 2006  
Galerie Piece Unique, Paris, France, 2006  
Museo Nacional Centro de Arte Reina Sofia, Madrid, Spain, 2005  
MAM Maro Mauroner Contemporary Art, Vienna, Austria, 2005  
Price Tower Arts Center, Bartlesville, Oklahoma, 2005  
Kogart, Budapest, Hungary, 2005  
White Box, New York, New York, U.S.A. 2004  
Galleries de Lycee, Fond Regional d'Art Contemporain de Picardie, Amiens, France 2004  
Whitney Museum of Art, New York, New York, U.S.A. 2003  
Nevada Museum of Art, Reno, U.S.A. 2003  
Centre de Cultura, "Sa Nostra", Palma de Mallorca, Spain 2003  
Ierimonti Gallery, Milan, Italy 2003  
Eaton Fine Arts, West Palm Beach, Florida, U.S.A. 2003  
Michael H. Lord Gallery, Milwaukee, Wisconsin, U.S.A. 2002  
John Gibson Gallery, New York, U.S.A. 2002  
Eaton Fine Arts, West Palm Beach, Florida, U.S.A. 2002  
Joseph Helman Gallery, New York, U.S.A. 2002  
Guild Hall, East Hampton, U.S.A. 2001  
Joan Guaita, Palma, Spain 2001  
Musee des Beaux-Arts d'Arras, Arras, France 2001  
Dorfman Projects, New York, U.S.A. 2001

SELECTED GROUP EXHIBITIONS

Museum of Contemporary Art Tokyo, "Collection of the Fondation Cartier Pour l'art Contemporain," Tokyo, Japan, 2006  
Centre national d'art Georges Pompidou, "Big Bang: Creation and Destruction in the 20th Century," Paris, France., 2006  
Tecomah, "Les Environnementales #3," Jouy-en-Josas, France 2004  
Tate Liverpool, "Art, Lies and Videotape," Liverpool, England 2004  
Valencia Biennial, "The Ideal City", Valencia, Spain. 2003  
Kunsthalle Dusseldorf, "Ready to Shoot- Fernsehalerie Gerry Schum," Dusseldorf, Germany 2003  
Museo Nacional de Bellas Artes, "II Buenos Aires International Art Biennial", Buenos Aires, Argentina. 2002  
The Whitney Museum of American Art, "The American Century 1950-2000, Part II," New York, New York, U.S.A. , 1999  
XXIV Biennale Sao Paulo, Sao Paulo, Brazil, 1998

#### SELECTED COMMISSIONS

ELECTRIC FIELD, 2006

Oregon State University, Corvallis, Oregon

FLYING GARDENS, 2005

Sacramento International Airport, Sacramento, California, U.S.A.

CRYSTAL GARDEN, 2003

University of Cincinnati, Ohio, U.S.A.

PERFORMANCE PIECE, 2000

Collection of the Johnson County Community College, Overland Park, Kansas, U.S.A.

STAGE SET FOR A FILM. (AN EVENT SCULPTURE)., 2001

Commissioned by the Regional Arts and Culture Council for the Expo Center in Portland, Oregon, U.S.A.

MONUMENT TO ESCAPE, 1999

Commissioned by the Committee for Monuments to Victims of State Terrorism, Buenos Aires, Republic of Argentina, 2001

BUS HOME, 1999

Commissioned by the City of Buena Ventura, California, U.S.A., 2001

JUMP AND TWIST, 1999

Collection of the Albert-Luwig University of Freiburg, Germany

DRINKING STRUCTURE WITH EXPOSED KIDNEY POOL, 1998

Collection of Europos Parkas, Vilniaus, Lithuania

STAGE SET FOR A FILM, 1998

Collection of the City of Valladolid, Spain

ENGAGEMENT, 1997

Collection of the City of Leoben, Austria, and the Collection of the Helsinki City Art Museum, Helsinki, Finland

DEVICE TO ROOT OUT EVIL, 1997

Collection of The Denver Art Museum, Denver, Colorado, U.S.A. and the City of Palma de Mallorca, Spain

#### Major Articles

2000 Pamela C. Scorzin, "D.O.," *Kunstler*, 50: 2, p. 3-16

1997 Eleanor Heartney, "Dark Laughter," *Art in America*, Apr, p. 102-107

1992 G. Roger Denson, "A Poesy of Diagnostics or the Object-Neurology of D.O.," *Parkett*, Spring, p. 20-29

1991 Calvin Reid, "Existential Collisions and Ghostly Herds," *Journal of Art*, Dec, p. 39-42

1984 Dennis Oppenheim, "And The Mind Grew Fingers," *Oberlin College Bulletin*, Vol. 2, p. 100-111

1981 Emily Braun, "D.O.: The Factories," *Arts Magazine*, Jun, p. 138-141

1979 Stuart Morgan, "Gut Reaction," *Artscribe*, Feb, p. 34-38

Jean Christophe Ammann, "Neue Installationen 1978/79," *Magazin Kunst*, Jun, p. 24-33

#### BOOKS AND CATALOGUES

2001 Oppenheim: Explorations, Germano Celant, Charta, Milano, Italy

2000 Sculpture in the Age of Doubt, Thomas McEvilley, Allworth Press, New York, New York

1997 Dennis Oppenheim, Germano Celant, Charta, Milano, Italy

Dennis Oppenheim, Fundacao De Serralves, Porto, Portugal

1996 Dennis Oppenheim Land Art 1968-78, Vestsjaellands Kunstmuseum, Storgade, Denmark

