

A low-angle architectural rendering of the World Trade Center Memorial Complex. The image shows several tall, modern skyscrapers with intricate facades, including a prominent tower with a large, curved, metallic sculpture at its peak. The sky is a deep blue with soft, wispy clouds. The overall composition is dramatic and emphasizes the scale and height of the buildings.

WORLD TRADE CENTER MEMORIAL COMPLEX

Conceptual Proposal by Johan Perslow

Acknowledgments

World Trade Center Memorial Complex design by Johan Perslow, P.E.

Story written and edited by Johan Perslow, P.E. and Katherine A. Hills

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Special Thanks

To all my family, friends and co-workers for their inspiration and support and for their belief in my vision.

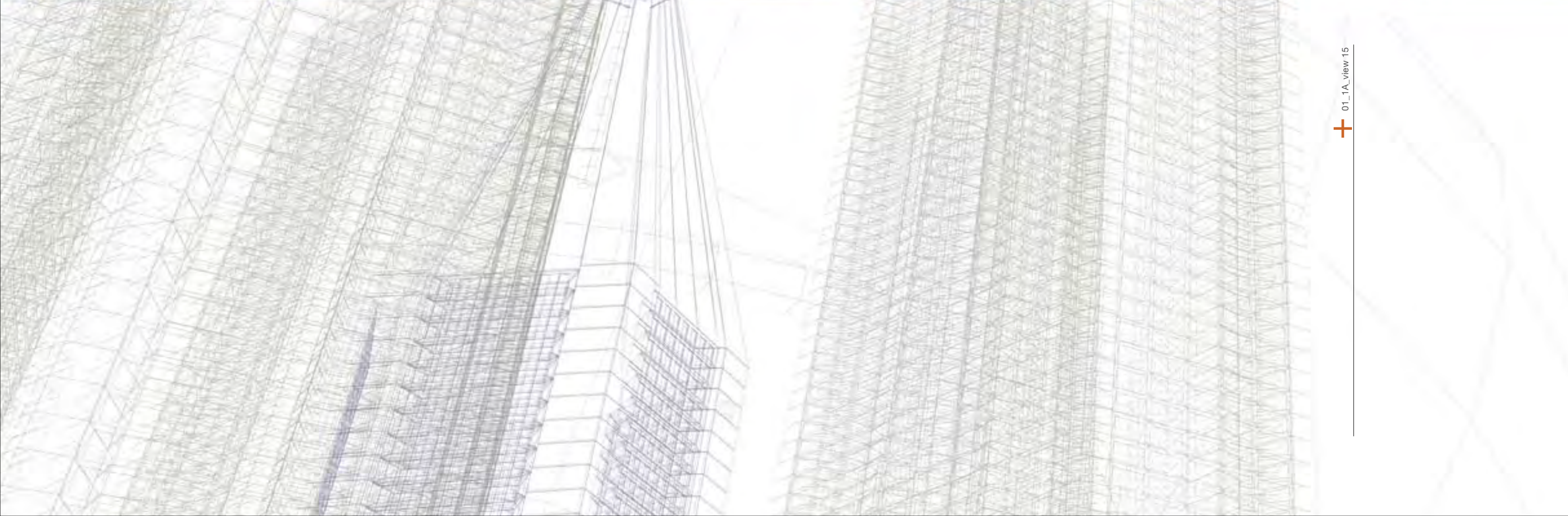
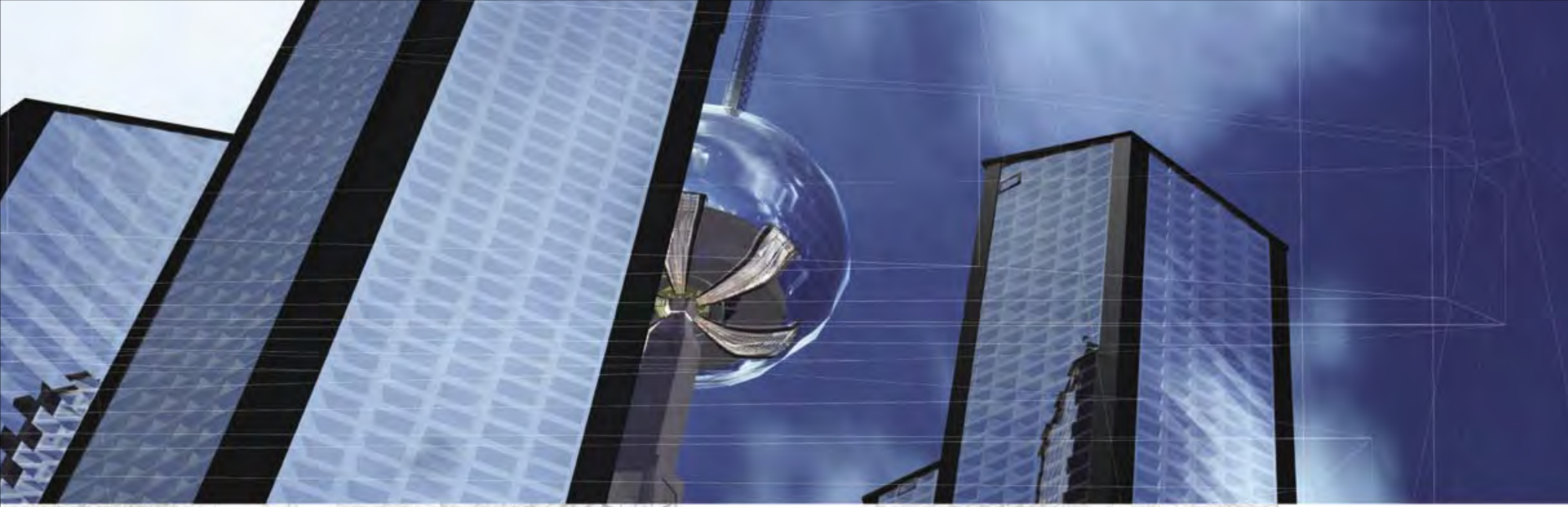
Dedication

This design is dedicated to the people of the world, who were all touched in some way by the challenge against freedom.

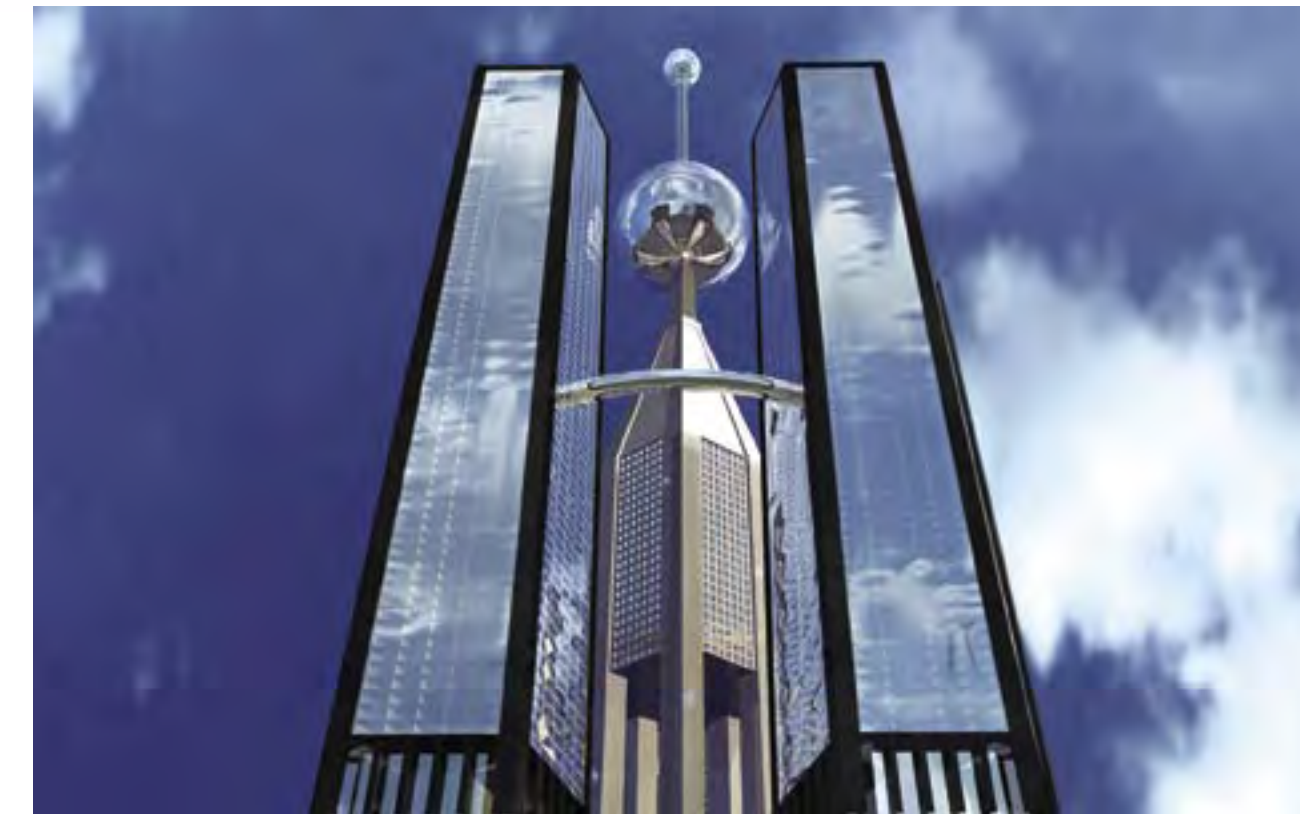


WORLD TRADE CENTER MEMORIAL COMPLEX

Conceptual Proposal by Johan Perslow



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WTC: introduction 01

World Trade Center Memorial Complex

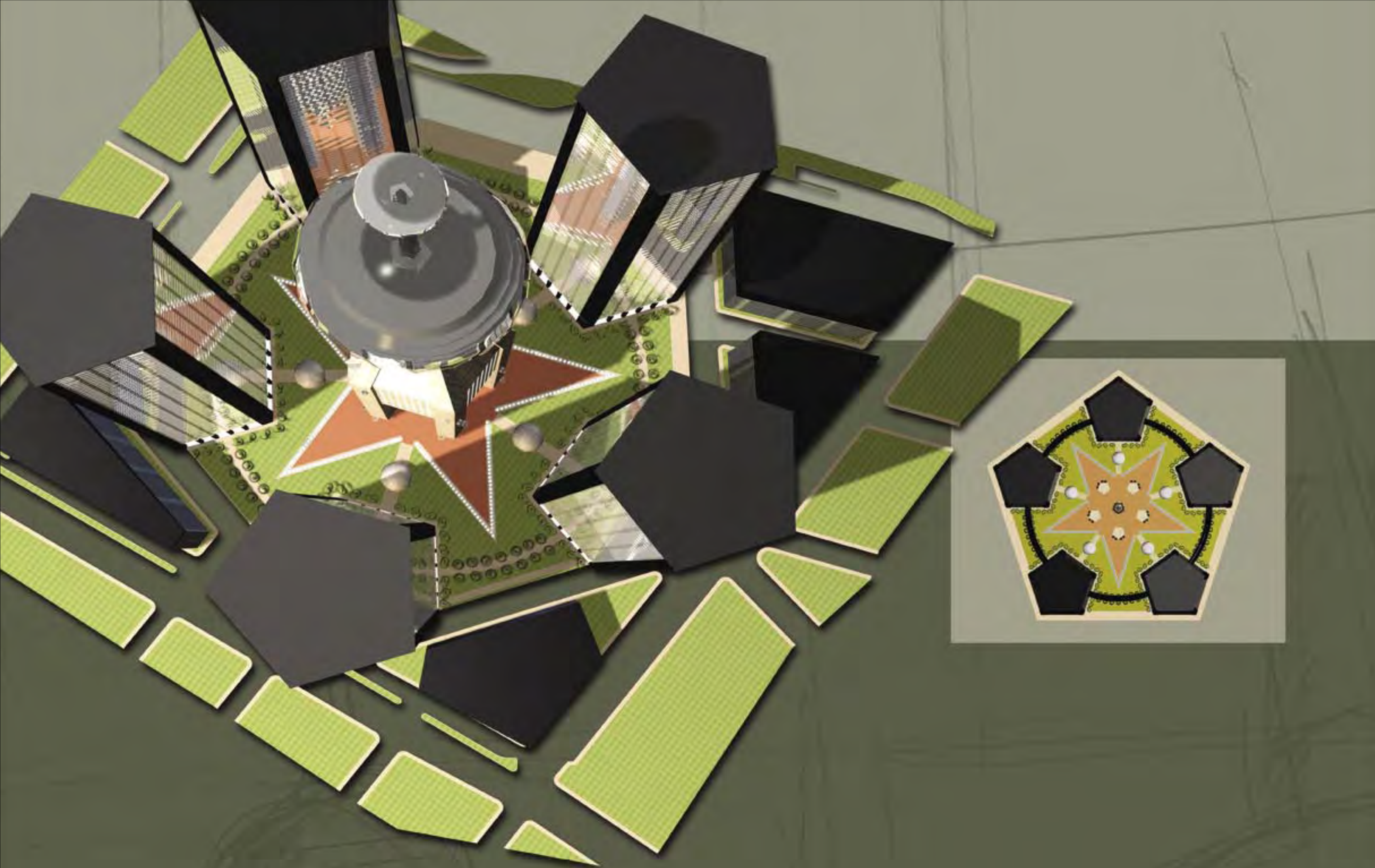
Johan Perslow's World Trade Center Memorial Complex design is a celebration of life. It's not only a tribute to the everlasting memory of the victims, survivors, civil servants, and citizens of New York, America and the world, it's a multi-use complex that focuses on the spirituality of the land – a place where people can work, visit, enjoy, learn, remember and hope.

Perslow's design combines much-needed office space with art and cultural venues, retail and restaurant opportunities. It adds seven acres of parks and open space to the crowded city. Its phased development strategy revitalizes Lower Manhattan in the shortest possible period. And the design respects its predecessor's majestic heritage while at the same time invigorating the

New York City skyline with a dynamic and unforgettable architectural aesthetic.

As you explore the design, dare to be touched by the cool water of the Eternal Fountain at ground zero. Dare to let sunlight stroke your face as it filters through the ground-level crystalline prism through the seven-story underground shopping and entertainment complex. Take a ride to the highest orb of the Memorial Tower and dwell on the possibilities of a future that knows no threat of terrorism, while remembering those who died so that we can live in a future without fear.

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+ 02_4V_View 15

ground level

ground zero



702

WTC: the design 02

World Trade Center Memorial Complex



Basic geometry tells us a pentagon is stronger than a square or rectangle. If one corner is destroyed, a pentagon can still stand, as was confirmed when the Pentagon was attacked in Washington, D.C.

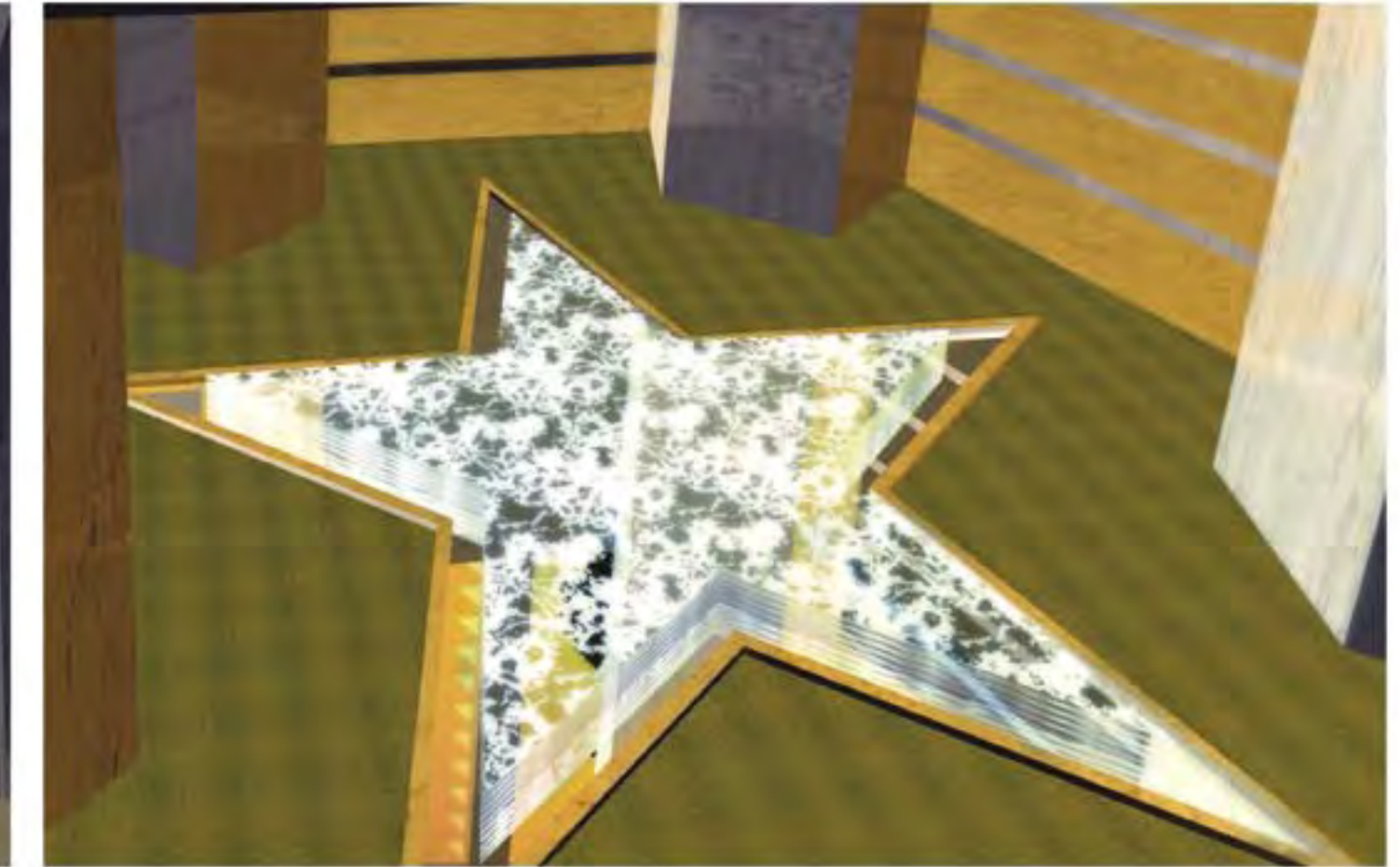
Each of the five corners of this Memorial Complex will serve as the site for a pentagonal-shaped 76-story glass office tower, forming the outer perimeter of the complex. The five buildings represent the regions of the globe that trade and communicate within the complex – North America, South America, Europe, Africa, and Asia Pacific, including Australia.

At the 38th floor, a sky bridge connects the towers to form a circle connecting the five office buildings. Not only will the sky bridges afford spectacular views of the city and harbor, they will serve as a means for tenants and visitors to move between buildings and travel up or down without having to return to the lobby. Each of the buildings will house shops and restaurants on the 38th floor, acting as social hubs during lunch and other busy times.

In the exact center of this encircled pentagonal real estate design, surrounded by the five pentagonal towers, is The Memorial Tower.

Highlights

- Seven of the ten available acres of land will be utilized as parks and open spaces.
- Five office towers will offer over 10 million square feet of office space – more than the original WTC.
- The office towers can be built in phases, thereby allowing Lower Manhattan to return to its full vitality as soon as possible.
- Sky bridges will connect the towers at the 38th floor – the halfway point of the towers – creating a spectacular meeting space for tenants and visitors with shops, restaurants and awe-inspiring views.
- The Memorial Tower will house over 250,000 square feet for a museum dedicated to the events of September 11, 2001.
- A 4,000-seat concert hall housed in the Memorial Tower.
- The Memorial Tower's larger orb – representing the earth – will house restaurants and shops with unparalleled views.
- The Memorial Tower's smaller orb – representing the boundless limits of space – reaches the same height as the original WTC towers.
- From any surrounding street, unobscured sight lines through the park enhance the feeling of open space and offer numerous security options.



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WTC: heart of the complex 03

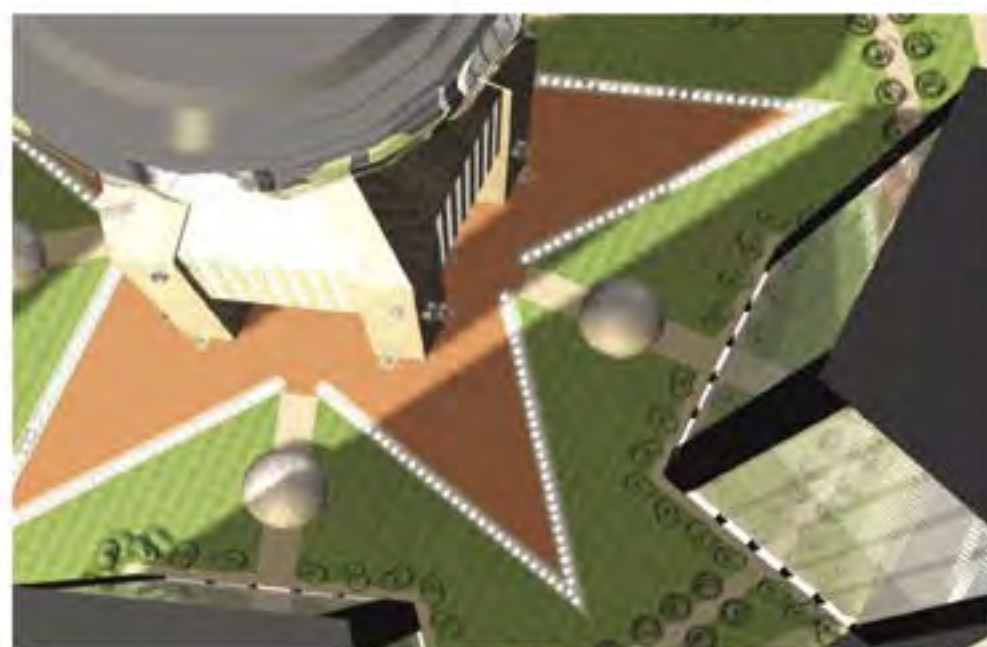
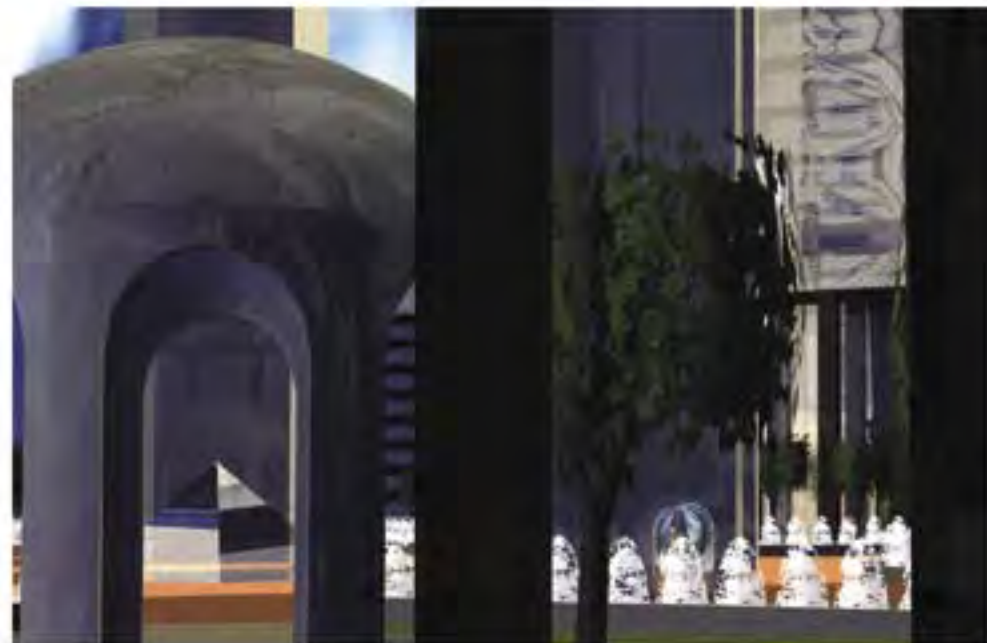
World Trade Center Memorial Complex

It is at the heart of the complex where the emotional connection to the design is most keenly felt. In the midst of glass and steel, Perslow's design reminds us that the most basic elements of life remain the most important. The center of the complex pulses with the rhythm of human interaction, while sunlight and water fuse in a rhapsodic celebration of life-giving forces.

At ground level, five pentagonal-shaped pillars support the Memorial Tower. A walkway from each of the five surrounding office towers leads visitors toward the center Memorial Tower via classic archways. Visitors pass through these porticos to a precisely centered pentagonal glass prism that rises from the ground. The glass prism

collects sunlight by day, and amplifies the sun's light downward seven stories, through a pentagonal-shaped shopping atrium, to true ground zero.

At ground zero, an eternal fountain in the shape of a star springs from the earth. The water glistens in a sunlit dance – a celebration of life-giving force. The seven underground stories provide parking and shopping floors, with balconies on each floor letting visitors enjoy the glass prism above or look down to the perpetual fountain that flows in memory of those who perished on that fateful day in September.



04_3A_view 23



04_3A_view 23



04_BB_view 12



WTC: ground level

World Trade Center Memorial Complex

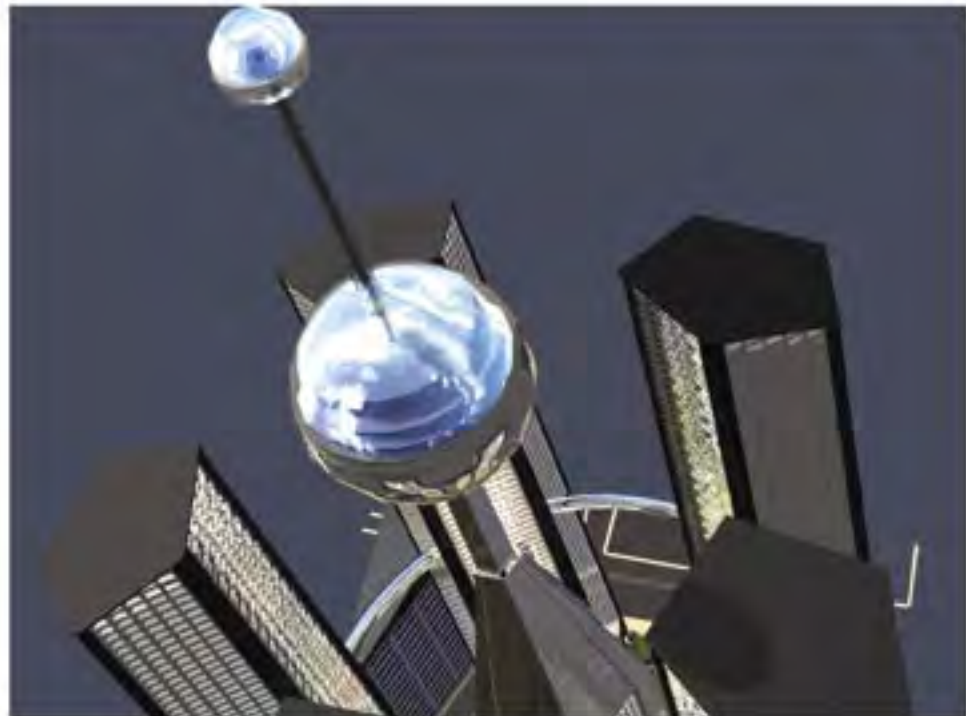
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Back at ground level, a star-shaped pattern, created in marble from around the world, surrounds the glass prism. The outside boundary of the star is lined with hundreds of six-foot high water-spout fountains spaced every three feet. Visitors can enter the interior portion of the star via walkways that lead from each of the five surrounding towers. They can touch the glass prism, and on warm summer days, feel the cool mist from the fountains on their upturned faces.

From the outside edge of the star pattern to the outside edge of the pentagonal footprint of the complex grass, trees, flowers, flora and fauna from all countries of the world create a park that fills the outside center ring of the complex. Not only does open space consume the majority of the complex for the benefit of the people of earth, it gives those working in the towers a way to connect with the land. No longer part of a concrete jungle, tower occupants can look down to see lush greenbelts rather than concrete and steel. Visitors to the complex can enjoy the peacefulness of the park, keenly aware that those who died are remembered in the hearts of those who seek solace at the memorial.

The parks open to the street scenes that have long been the trademark of Gotham. Whereas the prior design blocked off much of the cityscape from the WTC complex, this design brings the city and the memorial together with nearly one-quarter mile of street and park access. The office towers supply more than 10 million square feet of much-needed office space, while consuming only three of the 10 acres of the complex. An additional five acres immediately surrounding the complex provide ample opportunity for the rebuilding of other businesses lost in the 9/11 disaster, including offices, retail shops, hotels and restaurants to service the citizens of New York and the estimated six million people that will visit the memorial complex annually.

Roads line the outside of the pentagonal-shaped footprint, allowing for access from all five sides – by car, taxi, subway, bus, bicycle and foot. Only a few hundred yards from the shoreline, ferries bring the world's visitors to experience this sacred memorial.



WTC: the memorial tower 05

World Trade Center Memorial Complex

Surrounded by five office towers that stand guard, the center tower functions as a celebration of life. Beginning 25 stories off the ground, supported by five pentagon-shaped columns, the center tower houses performing arts, meeting and event space, and memorial museums and galleries.

Glass elevators on the exterior of each pentagon-shaped column whisk visitors upward. Floors 25 through 30 offer different venues dedicated to performing arts – including a 4,000-seat concert hall.

Floors 31-40 host meeting and event space. For example, our Homeland Security Council might choose to assume some of the space on these floors, or perhaps the United Nations would find it an appropriate place for satellite meetings and events, or even a permanent satellite office.

The top floors – 41 through 48, would serve as a 250,000 square foot memorial gallery and museum space, protecting the truth and memory of the WTC and Pentagon attacks. The top usable floor of the center tower

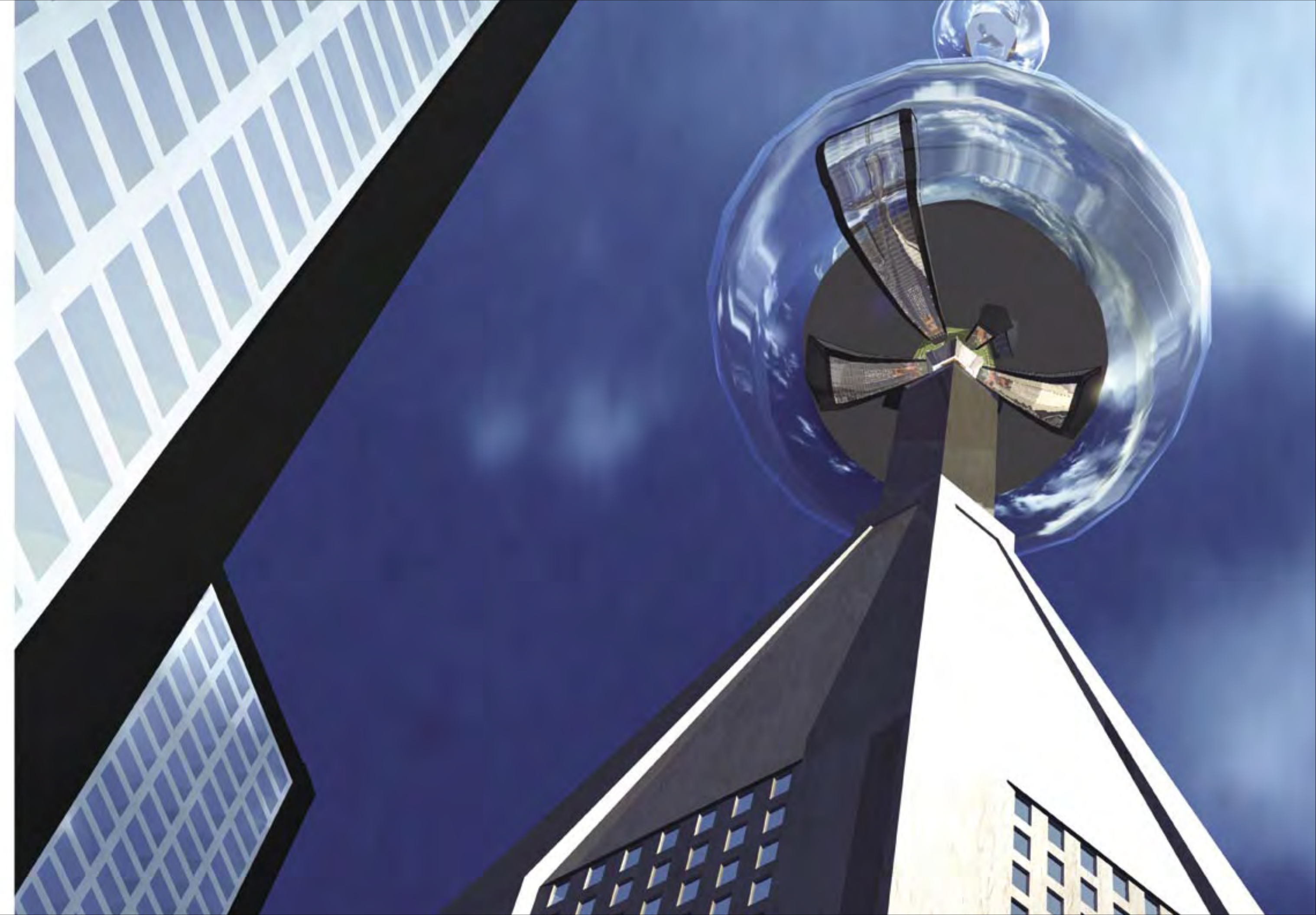
features a vaulted ceiling stretching over seven-stories high. This sprawling space, reaching skyward, begs contemplation of the universe's many mysteries.

Up through the seven-story enclosed prism and continuing up another 12 floors through a column, elevators take visitors to a point 85 stories above ground – equal in height to the five sentinel office towers – to a gigantic glass orb representing the earth. Inside the orb, visitors have a bird's-eye view of the WTC memorial complex and the Manhattan skyline from 360-degree observation floors. Under a seven-story dome, the center floors of the orb house several world-class restaurants offering spectacular views.

For the most adventurous visitors, there's more. In elevators or stairs rising through a cylindrical glass column, tourists can travel to the smaller orb that sits just over 110 floors above the earth – just past the height of the original WTC towers. The smaller orb represents space – a universe without limits, the next frontier, and the hope of a better tomorrow. Observation floors, designed

for 360-degree viewing, will give visitors to this sacred vantage point a hauntingly unforgettable experience.

The beauty of this Memorial Complex lies not only in its aesthetics but also in its practical design, structural integrity and emphasis on human contemplation. Likely to be one of the most visited attractions in the world, this complex has been designed for all seasons, as well as day and night accessibility. Johan Perslow's World Trade Center Memorial Complex design blends elegance with practicality, practicality with vision. It is a testament to freedom and a commitment to future generations of the world, and we are reminded that in the aftermath of tragedy, redemption and hope are the most enduring human forces.





WTC: about the designer

World Trade Center Memorial Complex

Swedish-born Johan Perslow discovered his love for nature and art at a very young age, spending as much time as he could studying the woodlands and lakes that surrounded his home. With a natural inclination for mathematics and analytical thinking, Mr. Perslow excelled in math, physics and engineering. At age seven, he decided that he would be an architect when he grew up. But as he grew older, his curiosity for matters of the mind prevailed, and it was then he began his never-ending quest to learn why people think the way they do, how personal and social influences affect the thought process, and how people respond to their thoughts. Throughout his formative years, Mr. Perslow independently studied psychology, philosophy and art, but ultimately returned to engineering courses that would lead him to a career in civil and structural engineering.

In his early college years, Mr. Perslow first studied mathematics, physics and languages at a junior college in Sweden, then earned his Bachelor of Science degree in civil engineering with a minor in structures from the Technical College of Orebro. While in college, Mr. Perslow spent summers studying under Professor Sven Olof Asplund, the youngest man ever to be chief structural engineer for American Bridge. Now deceased, Asplund was perhaps best known for his 1965 work on the Gothenburg Suspension Bridge in Sweden, boasting the tallest concrete towers ever erected for a bridge at the time. During the summers that Mr. Perslow worked with Professor Asplund, Asplund consulted as a senior design advisor for the Verrazano-Narrows Bridge project in New York. Professor Asplund became the mentor for a young mind. They kept in touch and Professor Asplund even visited Mr. Perslow in Kentucky.

Following college, Mr. Perslow joined the Swedish army special forces, where his engineering aptitude earned him a place as a demolitions expert. While in the army, Mr. Perslow started flight school, and earned his private pilot's license. Once Mr. Perslow fulfilled his commitment to the Swedish army, leaving on an honorable discharge as a second lieutenant, he moved to the U.S. to study graduate level economics and marketing at the University of Kentucky, Louisville, while working full time as a junior structural engineer for consulting structural engineering firm Hazellet & Erdal. Mr. Perslow's idea was that structural engineering would form the basis for his future in architecture, and the economics and marketing would come in handy when he started his own business someday. While with Hazellet & Erdal, Mr. Perslow contributed to many projects, including the building of bridges over the Mississippi and Ohio rivers.

Mr. Perslow returned to Sweden for a few years to study advanced concrete construction, earning his diploma in the subject from the University of Technology in Stockholm. Sweden is widely recognized for its advanced principles in concrete construction, since its native rock creates some of the strongest concrete available in the world. While studying, Mr. Perslow worked for global general engineering contractor Skanska. Mr. Perslow took his newfound knowledge and combined it with his structural and design engineering training and went to work for Trico in Phoenix, Arizona. As project engineer for Trico, Mr. Perslow's team provided the master planning and engineering infrastructure for Havasu City and Fountain Hills, Arizona, including roadways, water, sewer, flood control and waste management systems.

Eventually, Mr. Perslow moved to California and was instrumental in forming the committee that set the guidelines for landfill and toxic waste containment, working as technical advisor for the committee headed by the EPA and chaired by National Sanitation Foundation (NSF).

Several years later, Mr. Perslow founded Pacific Aquascape, a water and water resource contractor specializing in water features and amenities for retail, hotel chains, golf resorts and cities throughout the U.S. Notable clients include Westin, Hyatt, Hilton, and Sheraton Hotels, and golf properties designed by Arnold Palmer, Tom Weiskopf and Jack Nicklaus.

Mr. Perslow also founded PACE (Pacific Advanced Civil Engineering) in order to expand his reach into complicated flood control, erosion control, and environmental mitigation. Although separate corporations, Pacific Aquascape often hires PACE to plan the water projects they build. PACE specializes in solving flood problems in nature friendly ways, building flood control systems that appear to have been designed by nature, rather than building unappealing concrete control systems. PACE holds patents on several erosion and flood control techniques.

Three years ago, Mr. Perslow founded his third company, PERC (Pacific Environmental Resource Corporation), specializing in water reclamation and wastewater treatment. PERC has demonstrated to the world that water treatment can be a good neighbor within the community, producing high quality water that can be safely and economically returned to the community. In a quest to reach out to third world countries where water is a

precious resource and pollution is rampant, Mr. Perslow has perfected a small footprint wastewater treatment facility, with patents-pending on several important water treatment technologies.

Throughout his career, Mr. Perslow has lent his expertise to well-known projects around the world, including Biosphere II in Arizona, where his team created the water recycling system. Mr. Perslow has won awards from Valleywide (Arizona) for best technical utility water reclamation facility. The same facility took 2nd place honors for architectural design, combining function with aesthetics, proving yet again that technical and aesthetic solutions can go hand in hand.

Mr. Perslow's passion for humanity and his love for nature are both served by the water and wastewater solutions he designs. His breadth of knowledge in the arts, and his knowledge of engineering, psychology and nature, combine in designs that are good for the earth in all respects. From the aesthetic water amenities that resort-goers have come to expect and appreciate, to the structurally sound bridges that span some of America's most important waterways, Mr. Perslow is a man not only based in practicality, but blessed with a vision for the future and a heart for the people of the world.