

A Vision for the World Trade Center Memorial

*Harmony with the Design and Beauty of Nature and
Inspiration from the Greatest Architecture of Civilization*

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To: Imagine New York, a project of the Municipal Art Society

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Subject: A Proposal for the Design Elements and Museum of the World Trade Center

EXECUTIVE SUMMARY OF PROPOSAL

Concept: Use the golden section as a unifying theme in the WTC site design and include a Museum of Harmony in the site plans.

Reasons:

- It would let people truly *understand* beauty in nature and inspire an appreciation of our oneness with a greater design. (See Exhibits below.)
- It meets many of ImagineNY's 49 Visions for the site, including creating a place of peace and harmony that fosters spirituality and multiculturalism, and, as the Vision states, is innovative, awe-inspiring and "something exemplary that grabs the soul."
- Being based solely on the mathematics of design found in nature, the golden section is as spiritual as is each individual in their own personal beliefs about God and life, and thus transcends all boundaries of denomination or religious belief, as well as of culture and time.
- It draws on the inspiration of civilization's greatest and most enduring architecture.
- It creates a unique opportunity for international education, research and discovery.

Our proposal for the rebuilding of the World Trade Center is to create overall harmony in the design of the WTC site through use of the timeless and universal principle of design known as the Golden Section or, as it was called by Leonardo Da Vinci, the Divine Proportion.

The Golden Section can be applied in many ways and has been used by the designers of the world's greatest architecture since the beginning of civilization, appearing in the Great Pyramid of Egypt, the Parthenon of Athens, Notre Dame Cathedral in Paris and, more subtly so, in the United Nations Building (Exhibit A). It has been used for centuries by artists, including extensive use in the paintings of Da Vinci and Seurat. (Exhibit B).

The Golden Section, unlike any other principle of proportion, creates a unique and innate sense of balance and

harmony with nature. Why? Because *nature itself* is designed on the same proportion. Examples of its appearances include:

- The human body, which provides some of the most wonderful illustrations of the Golden Section in nature (Exhibit C).
- The physical proportions of design of many plants and animals (Exhibit D).
- The spiral designs of everything from sea shells to pine cones to galaxies (Exhibit E).
- The characteristics of certain aspects of the solar system, including the rings of Saturn (Exhibit F).
- The geometry of shapes and solids based on the number five, including the stars on the U.S. flag and the design of the Pentagon in Washington, D.C. (Exhibit G).
- The natural frequencies of music. It is used in the design of violins and was even used in the compositions of some classical composers.
- The proportions of human DNA (Exhibit H).

The Golden Section has been studied and applied in many separate fields, but nowhere in the world are all its diverse applications presented in a single place. Nowhere is there a place that allows people to understand and appreciate the beauty and harmony of all that is around us. This is a "golden" opportunity to make the 21st century a golden era of civilization that recognizes the inherent beauty and harmony of life and the universe in which we live.

There are 49 Visions presented for the WTC site. There is no other principle of design that has the same power to meet so many of the Visions, and also to unify them, as illustrated below:

- **A peaceful oasis:** What could create a better sense of peace than to be in a place that visibly demonstrates in its architecture, art, music and exhibits that we are one with nature and a greater design?
- **A spiritual/healing component:** When people understand how much we are one with the design of nature, they will also better understand how much we are one with each other. Because the Golden Section is based on the mathematics of design found in nature, it is as spiritual as is each individual in their own personal beliefs about God and life, and thus transcends all boundaries of denomination or religious belief.
- **Multiculturalism and tolerance:** The Golden Section transcends all cultural and religious barriers, having been used across all cultures and all times in human history. It becomes a physical manifestation of the beauty, harmony and peace that should be present in our social and spiritual relationships.
A living memorial: This approach to design provides an opportunity to integrate and harmonize all elements of the memorial, from those found in nature to the manmade.
- **A memorial museum:** The goal of including an onsite museum would have two purposes. The first is to serve as a living witness to the tragedy and heroism of September 11. The second is to educate people, through the Golden Section, that we are one with nature and part of a greater design and purpose. Unfortunately, this second element is missing in some memorials. It is, however, the element that generates a deeper understanding of the choices we can make in life, destroying to pursue our own purposes or unifying to seek a higher purpose.
- **Emphasis on design:** The Golden Section cuts across time and culture to show the unifying principles of design in nature and is the inspiration for some of the world's greatest art and architecture. Few approaches have the same potential to meet New York's Vision of having a 21st century design that is innovative, awe-inspiring, and, as the Vision states, "something exemplary that grabs the soul."

The Golden Section is simple in concept but incredibly diverse in its application (Exhibit I). It would thus create harmony, balance and unity in the design of the center, but still allow for great creativity and wide diversity in its appeal. We believe it would create a site with stunning beauty and, at the same time, make an undeniable statement about the foundation of peace and harmony upon which life is based. It would also serve to foster a worldwide recognition of the ongoing opportunities for exploration of the Golden Section, as illustrated by the recent discovery of quasi-crystals, a new form of matter based on its geometry. This project could unite architects, artists, engineers, scientists and mathematicians from around the globe, all in a pursuit that would rival those of the Ancients in aesthetics and nobility of intent and spirit.

The inclusion of a Museum of Harmony and Golden Section on the WTC site would make the memorial complete. Such a museum would serve to educate visitors about the appearance of the Golden Section in nature, as well as its use throughout the memorial, museum, and grounds. This would foster a deeper appreciation for the symbolic meaning of a WTC site based entirely upon the Golden Section. If it is too ambitious a goal to design the entire WTC site on the Golden Section, it could still be applied to the Memorial Museum alone, and a Museum of Harmony could stand on its own to provide the same message. Dr. Stakhov has already developed a plan for such a museum that could be used for this purpose, if so desired.

We would be pleased to present any additional information needed to help others to understand the timeless and universal appeal of the Golden Section and to see how it can provide an integrated theme and harmonious design for the World Trade Center site.

Respectfully submitted by:

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Exhibits

The Golden Section - An Overview

The Golden Section is simply a ratio or proportion which results in number called phi (ϕ), or 1.6180339..., similar in concept to the number pi (π).

It can be constructed by taking a line and dividing it so that the ratio of the large piece (B) to the whole line (A) is the same as the ratio as the small piece (C) to the large piece (B):



So A is 161.8% of B and B is 161.8% of C.

Divide the line again and again in the same way:



Combine the segments to create a measuring stick or "Golden Ruler"™ that is found throughout nature.



or use the same relationship to form the Golden Rectangle:



Exhibit A - In Architecture

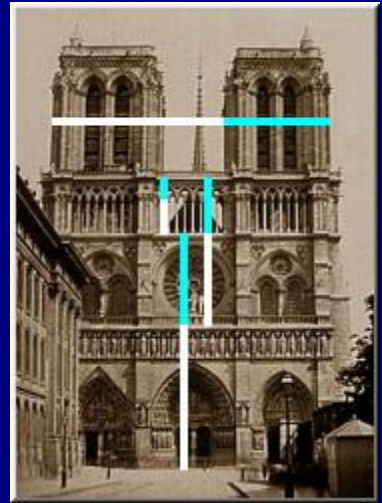
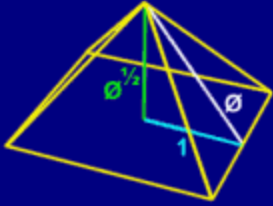
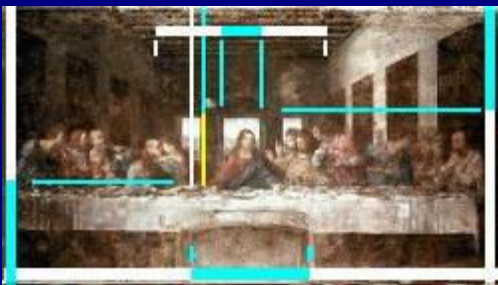
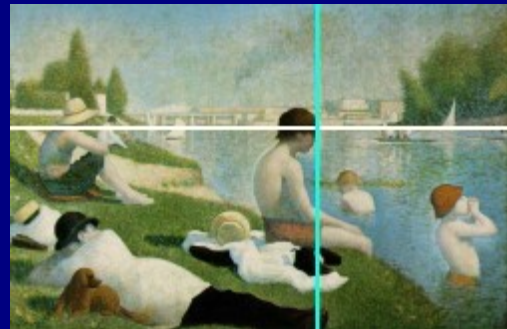


Exhibit B - In Art



Da Vinci

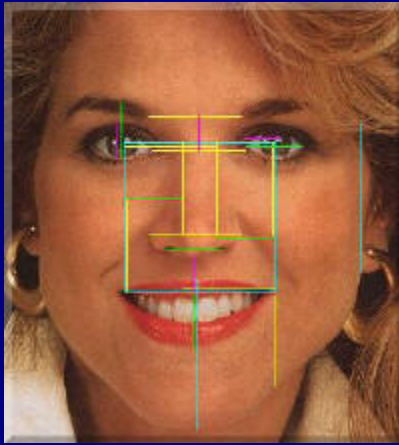
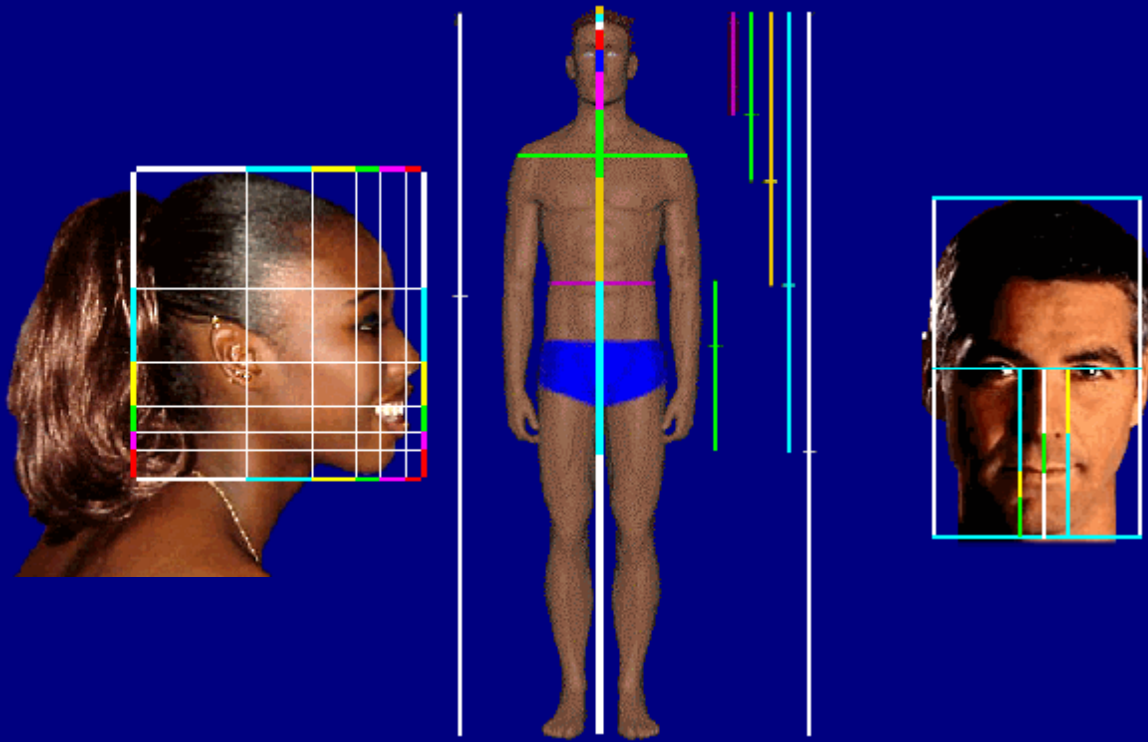
Used the golden section extensively.



Seurat

"Attacked every canvas by the golden section".

Exhibit C - In The Human Form



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2		3			5					8							



Exhibit D - In Animals

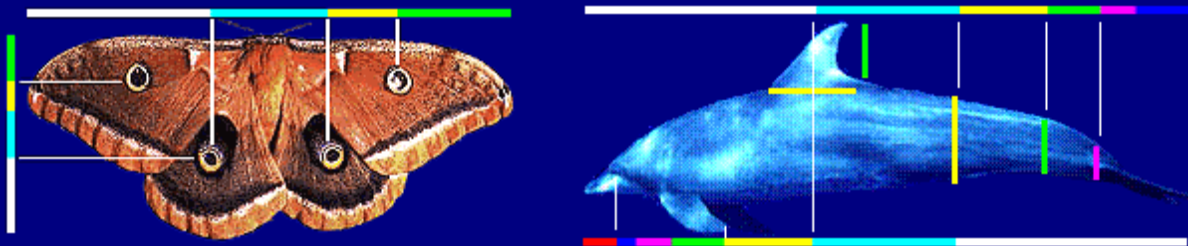


Exhibit E - In Nature's Spirals

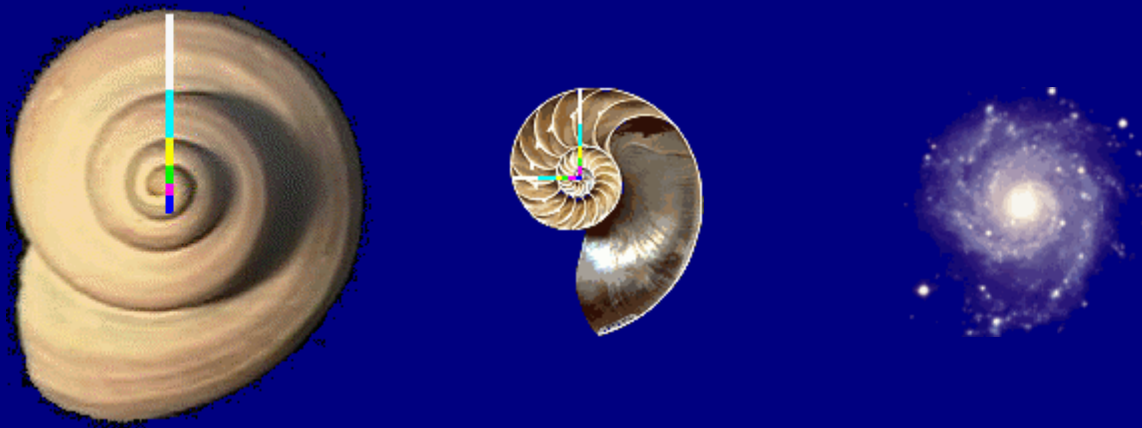


Exhibit F - In the Solar System

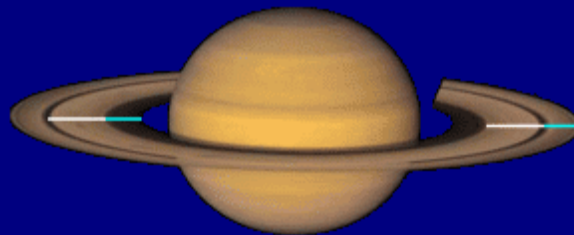


Exhibit G - In Geometric Shapes

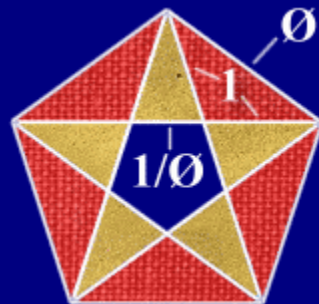


Exhibit H - In Human DNA

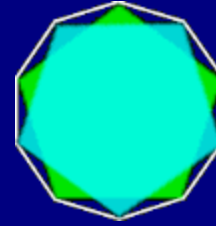
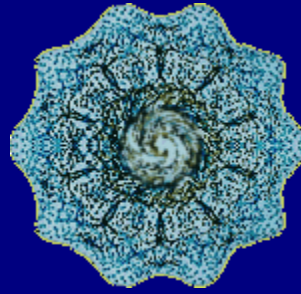
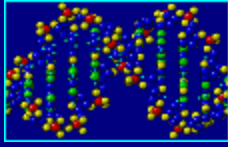
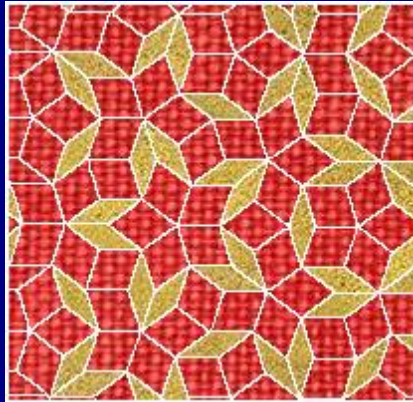


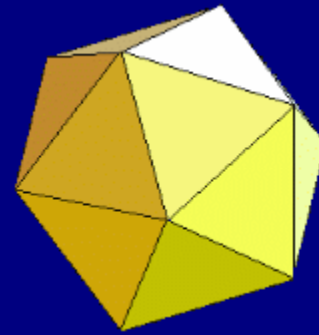
Exhibit I - Other Design Applications



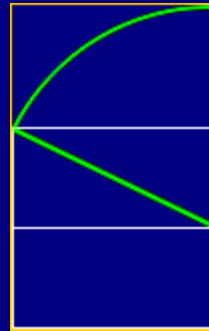
Tiles



Spiral Staircases



3D Shapes



Arches

All illustrations except spiral staircase, Copyright 2002, www.goldennumber.net

Spiral staircase illustration, Copyright 2002, <http://www.goldenmuseum.com>

Harmony With The 49 Visions

Below are additional illustrations of the ways in which this proposal for the design of the World Trade Center Site meets and unifies many of the 49 Visions for the site:

- Slow planning process - The rebuilding process for the WTC site must ensure thoughtful, sensitive planning and *top-notch designs*.
- Create a peaceful oasis - The memorial *should create the feeling of serenity, respect, reflection and spirituality*. It should invite visitors to linger in peaceful quietness — to remember, reflect and heal — but also *to celebrate life* and renew hope in a comfortable, people-friendly environment.
- Spiritual/healing component - The redeveloped site should include a *non-denominational sanctuary for healing, renewal and spiritual reflection where all can recognize and affirm their universal spirit*. A sacred place embracing elements of nature would evoke reflection and contemplation.
- Living memorial - An interactive living memorial park should be integrated into the WTC site plan, *joining elements of nature* (water, sky and light), landscaping (trees, gardens, an eternal flame, benches for reflection, statues and art), and the community.
- Multiculturalism and tolerance - Recognizing the powerfulness of the WTC site and New York City's commitment to diversity, the site should be used to *build understanding between people of different ethnicities, cultures and religions worldwide. It could include an international research and education center dedicated to promoting tolerance, unity and world peace*.
- Mixed Uses - The WTC site should be an accessible central gathering place with *a broad mix of uses - memorial, spiritual, commercial, residential, retail, recreational, cultural and educational* - that reflect the diversity of New York and the World Trade Center's status as an international symbol.
- Emphasize Design - The WTC site should ... include various design elements such as spires, glass or reflective materials. Above all else, they *must be innovative and awe-inspiring designs*, incorporating 21st century technology to ensure environmental and structural soundness. The buildings may integrate memorials into their physical structure and *must be "something exemplary that grabs the soul."*
- Restore the Skyline - Whatever is built at the site must be *a prominent, soaring symbol of life and must be visionary and forward-looking — architecturally, artistically and technologically*.
- Downtown Vitality - The WTC site *should celebrate life* and be a welcoming magnet for human activity and interaction.
- Cultural Facilities - A cultural center should be created as a hub for *all forms of artistic creation and expression*.
- Tourism - Lower Manhattan should be *a dynamic tourist destination*.

Other Concepts

There are at least three possibilities for the application of the Golden Section to the WTC site:

1. The entire WTC site.
2. A Museum of Harmony on the WTC site as a complement to the Memorial Museum.
3. A cultural center.

The design of the whole site is too vast for us to approach on our own, but we could provide general education on the application of the golden section or input to the architectural firms that are designing the whole site.

Added thoughts on option 2, the Museum, include:

Use a classical design, perhaps in the style of the Parthenon, as modern architecture often does not rival the

ancients for aesthetics because of economic constraints.

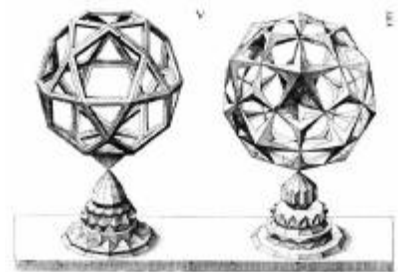
Have the museum enclose a large garden of remembrance, tranquil, aromatic and shielded from the clamor of the city outside, and conforming to the divine proportion.

The centerpiece could be a simple classical fountain while the garden would be divided into five or eight sections, some lending privacy with high plantings and some devoted to plants that readily illustrate the Golden Section.

The garden would be surrounded by a classical colonnade, providing more seating. Here in the peace and quiet would presumably be the place for the names of the victims of September 11 to be recorded in some form to be decided by their family and friends. There should be an opportunity for them to plant roses or shrubs and flowers of their choice, subject to the overall botanical design specifications.

The museum would be the centerpiece of a park that could feature all sorts of golden mean sculptures such as, for example, massive lolling glass icosahedrons or other polyhedra, such as the great designs by Wentzel Jamnitzer on fanciful stands, or huge carved wood pinecones.

There could be for plaques that could be set, perhaps, in the colonnade walk or on its walls, engraved with suitable poetry and thoughts from various cultures. Examples include:



What does my name mean to you?
But when you grieve, say it
In the silence, sorrowfully . . .
Speak that shall be my memorial
A heart where I live in the world.
- Alexander Pushkin

But he heard high up in the air
A piper piping away
And never was piping so sad
And never was piping so gay.
- W.B. Yeats

Life leads the thoughtful man on a path of many windings.
Now the course is checked, now it runs straight again.
Here winged thoughts may pour freely forth in words,
There the heavy burden of knowledge must be shut away in silence.
But when two people are at one in their inmost hearts,
They shatter even the strength of iron or of bronze.
And when two people understand each other in their inmost hearts,
Their words are sweet and strong, like the fragrance of orchids.
- Confucius

Live as if you were to die tomorrow. Learn as if you were to live forever.
- Mahatma Gandhi

You have heard that it was said, 'Love your neighbor and hate your enemy.'
But I tell you: Love your enemies and pray for those who persecute you.
- Jesus Christ