

WASHINGTON DeCoded

A New View Over the Capitol



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(2nd edition)

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An EarthMeasure Publication

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Truth is stranger than fiction. Fiction has to make sense.

Mark Twain

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Preface

The narrative of this book is autobiographical and informal. It tells the story of my discovery of highly accurate geometric features in the streets of Washington, D.C. I have lived with them for a couple decades and I still find them astonishing. At least two of the features mimic symbols from the Great Seal of the United States. Most of the features are accurate within a degree of the geometric models they were derived from. The results are replicable. My aim is to summarize the course of events that led to the discoveries.

What do these features represent or imply? This is not my job. I was in graduate school defending the use of sacred geometry as an archaeological tool for analyzing prehistoric architecture. The chairman of my graduate committee offered me a blind challenge — Washington, D.C. It was my first sojourn into Historical Archaeology and my first introduction to the layout of our National City. What happened is quantifiable.





The Western Terrace

So Below

Chapter 1. Beyond the Fringe

My introduction to the design history of the city plan for Washington, D.C. was inadvertent. Twenty years ago as an anthropology graduate student at the University of Arizona, I was discovering hard evidence that the prehistoric cultures of the Southwest practiced their own tradition of sacred geometry. I was focusing on the thousand year old ruins of Chaco Canyon, New Mexico, and additional evidence was turning up in Arizona and west Mexico. This was cutting edge research, yet my chairman called it "fringy." Although he was one of the more enlightened minds in the department, when he typified the kiva geometry work as *fringy*, I was immediately put on notice. It did not matter that this ancient geometry is a universally recognized science. [1]

I learned about this ancient geometry from a fellow graduate student who was exploring the designs of Mayan temples and other imposing monuments from Mesoamerican civilizations. During the past century, architects have traveled to the yet undisturbed ruins in Mexico and Central America, and drew highly accurate illustrations of the fronts of these monuments, and other parts that were still standing. Recent controlled excavations of the foundations for these same monuments provided plan views, or footprints – a bird's eye view of a building's foundations. My friend matched up one drawing with the other to reconstruct Mayan design strategies.

Working with geometry in three dimensions opened up a new perspective on prehistoric architectural design. The method he was using was classical (sacred) geometry, a practical, hands-on tradition hallowed as a mathematical standard across the millennia. The geometry became a foundation for western philosophy.

At this time I was examining <u>circular kivas at Chaco Canyon</u>, ca. 1000 AD. [2] Kivas are concentric-ringed pit houses considered to be ceremonial structures. They come in two varieties—small clan kivas and large great kivas. I told my friend that a lot of the clan kivas are divided into six sections, partitioned by pilasters (roof supports), and that the divisions were extremely accurate.

"Hexagons are easy!" he exclaimed. Ten minutes later I was looking at three different ways to make a hexagon with a compass and a credit card.

This changed the way I thought about the physical world, and it opened up a new way to look at prehistory—through the filter of a geometric lens. Mayan architects and engineers shared a deep understanding of <u>the geometry</u>, and my friend was using the same method to decode and reconstruct their design styles. It was a radical innovation—radical because 98% of all archaeologists are ignorant of this system.

Two intersecting circles sharing the same radius: this is the <u>vesica</u> <u>piscis</u>, the root construct of the geometry. It is an actual, physical, spatial standard of the mathematics. It is science incarnate. It is the cause and the birthplace of a science that explores the natural divisions of space using only the compass and straightedge.

The vesica was a door to the world of a natural geometry replete with a chorus of <u>built-in proportional constants</u>, and demonstrated that the circle was indeed the <u>mother of shapes</u>. Now in my mid-thirties, I was learning about the circle's radius and the hexagon for the first time—something I should have learned about <u>when I was nine</u>. Soon after, he showed me how to make the perfect <u>square</u> and <u>pentagon</u>. He demonstrated

how a square produces a <u>series of rectangles</u> and a sequence of square roots.

The regular triangle, square, and pentagon, and their derivations, opened everything up—from <u>art to architecture</u>. And not just in prehistoric times either; Madison Avenue's quest for logos invariably mines the same geometry. [3]

When working out the shapes on paper, I began to think of circles, radii and polygons as verbs, rather than as descriptive nouns—a geometry in motion in its own way, a universal geometry at the core of creation. It is non-random, non-invented, self-referenced and self-evident. It was the basis of an empirical science.

Yet when classical geometry occurs outside the sphere of Greek influence, it is generally referred to in the literature as *sacred* geometry. For an aspiring secular discipline like prehistoric new world archaeology, an experimental methodology with the name 'sacred' pinned to it makes it immediately suspect, at best. I didn't know that yet.

At the time, there was no way I could begin to think of the geometry in three dimensions. It made me dizzy, like trying to play three-dimensional chess. I was more at home with two dimensions, which in my case were the architectural plan views of Chaco's kivas constructed by the Anasazi, a complex farming pueblo culture in the prehistoric Southwest. The kiva divisions matched up with the perfect polygons. Most of the smaller clan kivas were divided into six parts, others were divided into eight, and a few larger ones were divided into ten equal sections. No sevens, nines, elevens. And no threes or fives, either. Just even divisions: 6, 8, and 10. The foundation of a Master's thesis was beginning to write itself.

Then I began to look at the more impressive great kivas, famous around the world for their mystical aura and their engineering. The **key to their design** was the square, which exposed the internal structuring for their floor features. The square and the circle were obvious polarities in the symbolism of Chaco Canyon culture. Circular kivas are considered to be ceremonial structures. The square and rectangular apartments that comprise the pueblos are generally considered secular. Did the Anasazi resolve this opposition, and if so, how? I measured the proportional spacing of the concentric rings in the great kivas. It seemed like the Anasazi knew how to *square a circle*, a mystical tradition in the old world, but unheard of in the new. I was also beginning to explore the architecture of other prehistoric cultures: the Hohokam design for the "big house" at the **Casa Grande Ruins** in central Arizona (ca. 1400 AD); and the circular temple architecture from **west Mexico** (ca. 500 BC).

My chairman simply said, no. He flatly stated that there was no new world precedent, in ethnography or archaeology, to justify this kind of research. Instead he suggested I focus on the **European baroque tradition** of the 17th and 18th centuries, and look around for the geometry there.

I was stunned, shocked.

As I was furiously thinking of possible alternatives to the baroque, he suggested I apply the geometry to <u>Washington</u>, <u>D.C.</u>, which actually sounded interesting. He didn't think anyone had applied the geometry to the District before. It was a baroque city, and it would be "historically strong;" moreover, all of the documentation would be in English.

It would also be a blind test for the geometry. Neither of us knew if anything would be found, so there were no expectations. I don't think I had ever laid eyes on a **map of the capital city** prior to this. The project would

hinge on the development of a methodology. He wanted a research design about how to examine a city like Washington, D.C. with sacred geometry. If I found something, great. If nothing, great. It was all about the methodology. *It's win-win*, he said. He encouraged me by saying many of the founding fathers were Freemasons who had a penchant for this kind of geometry, and that maybe there could be something in the plan, after all. (*What's a Freemason?* I asked myself.)

A couple days later I told him okay. He gave me the phone number of a local Freemason official, a professor at the junior college, who had agreed to discuss the history of the 'Craft' in America if it would help.

Had my chairman known beforehand what I would find, he would have chosen his words more carefully. If the kiva data was fringy, what was he going to call a **thirteen block-long truncated triangle** in the heart of the national mall, topped by a smaller triangle that currently serves as the stage for the **presidential inauguration?**

In the end, he called it "graduation." He accepted the pyramid-eye symbol perched against the Capitol of the United States of America as my smoking gun and I was awarded a MA. At the same meeting I was also given my walking papers because he told me that there was no one on the faculty who would consider a PhD dissertation involving sacred geometry. Academically, it spelled the end. It was the summer of 1989.

Chapter 2. A funny thing happened on the way to the Inauguration

CAMPBELL: No, no, you have to distinguish between reason and thinking. MOYERS: Distinguish between reason and thinking? If I think, am I not reasoning things out?

CAMPBELL: Yes, your reason is one kind of thinking. But thinking things out isn't necessarily reason in this sense. Figuring out how you can break through a wall is not reason. The mouse who figures out, after it bumps its nose here, that perhaps he can get around there, is figuring something out the way we figure things out. But that's not reason. Reason has to do with finding the ground of being and the fundamental structuring of order of the universe.

MOYERS: So when these men talked about the eye of God being reason, they were saying that the ground of our being as a society, as a culture, as a people, derives from the fundamental character of the universe?

CAMPBELL: That's what this first pyramid says. This is the pyramid of the world, and this is the pyramid of our society, and they are of the same order. This is God's creation, and this is our society.

The Power of Myth 1988, Joseph Campbell and Bill Moyers

At the end of the first month of research, I was staring at a cluster of <u>unreported geometric features</u> in the middle of the 1792 official plan for the city, including two that mimicked symbols on the <u>Great Seal</u>. The feature cluster was also present in the modern city.

There was a hexagram (six-pointed star) east of the Capitol, and a squat or distorted pentagram (five-pointed star) north of the White House. In the national mall there was a triangular complex that looked like the only thing it could be: a shining pyramid-eye symbol stretching from the White House to the Capitol.

I told myself that the two stars could just be fancy uses of avenues that worked with the symmetries chosen for the two sectors, or as simple

adornments. The hexagram was within a degree or so of perfect. The hexagram in the Great Seal was intriguing. The dotted triangle (a bowling pin arrangement) is traditionally called a *tetrakys*. [4] Here, there are two tetrakys intermeshed in a hexagram: 13 stars. If there was ever an example of the connect-the-dot nature of sacred geometry, here it was. The hexagram (Solomon's Seal) is made up of two perfect (equilateral, 60-degree) triangles. The points of intersections are the "dots." Erase the lines but keep the dots: this is the hexagram above the eagle.

The squat star – I had no idea if it had a geometric source; and there were no five pointed stars on the original Great Seal. During the 18th Century, heraldic protocols specified *no fewer than six points* [5] be used for stars; even the thirteen stars in the original hexagram were themselves hexagrams. Also, unlike the near perfect hexagram east of the Capitol, the White House star was not a perfect pentagram; and it was incompletely realized in the streets. The avenues were certainly intentional, and for me it was the most obvious feature in the plan. Still, the stars might have been just fancy additions.

I could not so easily write off the pyramid-eye complex. It was proportionately and symbolically congruent with the pyramid face's triangle on the Great Seal. And it was increasingly difficult to overlook the pairing with the hexagram on the other side of the Capitol. Both were situated on the east-west axis of the city. Both were symbols on the Great Seal. Both were here, on either side of the Capitol.

The "triangle" on the Great Seal contains two components: the pyramid and the eye. On the official 1792 Plan, the base of the pyramid begins at 15th Street, adjacent to the President's Grounds. The pyramid terminates at 2nd Street, and borders the Capitol Grounds. Thirteen city

blocks: the Great Seal's pyramid has thirteen ranges representing the original colonies. The Great Seal's triangle is proportionately congruent with the triangle outlined in the central core. With a roughly 70-degree base angle and a 40-degree apex, the triangle making up the pyramid face on the Seal seems to be a virtual match for the triangle proposed for the national mall. The eyed-triangle begins at the Capitol grounds with an apex just shy of the Capitol building. In its center was a black dot, a mark that depicted the future site of a statue, fountain or some other small monument.

The <u>built city</u> is a virtual replica of the 1792 official plan. It gave me the impression that it had been conceived of as a stamp to be engraved directly onto the landscape. The only <u>imperfection</u> was the positioning of the huge obelisk that replaced the planned equestrian statue. Its weight could not be supported by the underlying geology of the intersection, and was moved to firmer ground to the southeast. This knocked the plan off kilter, compromising the plan's exacting symmetry. Originally the monument functioned as the junction of the East-West axis of the Mall with the North-South White House axis. The original White House axis was restored and accentuated with the addition of the Thomas Jefferson Memorial. The rest of the plan was surprisingly consistent with the official 1792 plan.

The feature cluster remains in the built city. Pennsylvania and Maryland Avenues are now directly anchored to the Capitol Dome. The base of the modern "pyramid" triangle is 14th Street, and it extends to 1st Street where it meets the Capitol Grounds: still thirteen blocks. In both the 1792 plan and the modern city, the westernmost street that transected the national mall determined the base of the pyramid. The angles were consistent with the 1792 Plan. The smaller triangle has a base defined by the Peace and Garfield statues. The apex is now connected to Lady Liberty at the top of

the Capitol's dome, the center of the city. The sides of the smaller triangle are defined by walkways.

The three geometric features were the foundation, the starting point. Right off there was a problem with the protocols that would guide the study. The pyramid's triangle and the hexagram were virtually complete replicas of the national symbols, perched on either side of the Capitol, and fully supported by avenues and streets. The squat star north of the White House, on the other hand, was not a Great Seal symbol, and it was incomplete. One stretch was absent in the pentagram, and the pentagon surrounding the star was missing an entire side. Compared to the completeness associated with the other two features, was it valid to even call this a star/pentagon complex?

The question was *academically* mute. None of these geometric features were mentioned in the historic literature. Not a word.

As you can probably imagine, it was a profound experience to find a highly accurate pyramid-eye symbol in the middle of the National Mall. It was even more profound to discover that the "eye" serves as the modern stage for the presidential inauguration. On hindsight, maybe it should not have been that unexpected. If this symbol were to be placed anywhere, it would be here in the People's Park, and integrated with the Inaugural Parade that follows the new President to his official domicile. Why else was the White House placed where it was? It is just beyond the pyramid's base because it represents the executive branch and its separation from the legislative branch.

The president takes the oath on the sacred hill-pyramid (on high), which is administered by the chief justice of the Supreme Court (high priest), and after the event he takes the celebratory and ceremonial walk down the side of the pyramid (Pennsylvania Avenue) to his official

domicile. The same kind of ceremony took place wherever there were pyramids and kings and high priests to sanction their rule, be it Mesopotamia, Egypt or Mesoamerica. It is archetypal. And, it continues today every four years in the United States.

Thirteen blocks separate the President's Mansion from the Capitol Grounds. The angles of the triangle were the same as the pyramid face on the Great Seal. The smaller triangle on the Thackara-Vallance engraving could be suggestive as the pyramidian, but it is still fairly non-descript. When this micro-environment is viewed from above in its modern state, there is little else the Western Terrace can be but the Eye of Reason incorporated into the Capitol Grounds. The fountain is the eye, and for years the center of the fountain was adorned with a statue for the first chief justice, John Marshall – the pupil of the eye? On top of that, the Western Terrace is the place where all Presidents since Ronald Reagan have been inaugurated.

And of course something this big, this obvious, at the center of the soul of our nation – something must be mentioned in the literature.

It wasn't.

I had discovered something in DC that nobody ever wrote about before. If nobody ever noticed this extremely fortuitous construction of streets and avenues for two centuries, the obvious question to me was, *why?* It was right in the heart of the city. Every time a president makes the inaugural trek to the White House along Pennsylvania Avenue, he walks the thirteen blocks down the side of the Great Seal's pyramid.

There was no mention about any of these features, neither in the annals of planning commissions nor in books by architectural historians. I looked everywhere and called up numerous city historians. They didn't

know what I was talking about when I said, "pyramid." I seemed to be the first to notice it.

The geometry, like any bona fide science, provides replicable numbers. The 70-degree angle of the Mall's triangle and the thirteen city blocks are present, both on the original plan and in the city today. These structures are present, and accurately portrayed, mathematically and geometrically. The pyramid and the hexagram were fully defined by avenues. I just added a possible archetypal interpretation. Further, the modern "eye" had recently become the stage for the inauguration. A quantifiable argument was coming together in favor of the *intentionality* of specific geometric features, but there was no historical precedent to support this kind of argument.

Chapter 3. The Brief Design History of Washington, D.C.

Every city has some testimony to perception, intelligence, and art; there are oasis of concern and creation.

Ian McHarg. Design with Nature

No nation perhaps had ever before the opportunity offered them of deliberately deciding on the spot where their Capital City should be fixed.

Pierre Charles L'Enfant, 1789, letter to President Washington

Maybe the pyramid was never noticed because it was lying on its side.

The Plan of Washington, D.C, like all maps, is oriented north. North is always at the top. But this is actually a choice, a matter of cultural convention in the west. Other cultures and nations sometimes choose other directions for cartographic orientation. The Chinese, for example, traditionally oriented their maps to the south. Map orientation is a culturally relative choice. It was when I oriented the map with east at the top that the entire view of the plan changed—I was a novice, I did not know why. It felt more symmetrical this way, and more relaxed (if that makes sense). And this is when the pyramid's triangle popped out.

Was there a secret dimension to this map based on an eastern orientation? Again, I found no references for this kind of practice among cartographers, but then again I don't belong to any secret societies. It was becoming clear, however, that this is how the features were meant to be viewed for full effect.

The Vacant History of the City's Design

The remarkable thing about the history of the *design* of Washington, D.C. is its brevity. As a project in Historical Archaeology, history had dropped the ball regarding the biggest founding father artifact of them all: Washington, D.C. The city itself is an artifact because the design was exactly laid out the way it appears on the official 1792 document. The few alterations over the decades only accentuate that fact. Historically, this is not what planning cities was all about. Architect Ian McHarg listed several qualities about cities in the above quote that were turned into the questions below. These are the types of questions that architectural historians ask, questions that define their frames of reference.

What is the creative dimension of the design for Washington, D.C? What are its testimonies to perception, intelligence and art? What are its oases of concern and creation?

According to historical sources, the initial planning commission left behind no documents, or even a short statement, that described or conveyed these elements of the design or how in fact it did represent the new nation.

The most famous, functioning metaphor of the design is the central position of the Capitol, the 'house of the people.' This is a baroque design, and in Europe, royalty always inhabited the center. In the new republic, the center was the Capitol, dedicated to the people and their elected representatives. The royal palace became the president's mansion, and it was located over a mile away. Some would say that this exaggerated distance emphasizes beyond all doubt the new way of running a government.

President George Washington, who presided over the first planning

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commission, selected the site for the mansion himself. Still the question remains: why are there no written accounts by the members of the first planning committee detailing how and why they decided that this plan satisfied their mission – to design a city "worthy of a nation?"

L'Enfant's sketch plan of 22 June I791 was laid before the proprietors by George Washington the next week and their approval was noted in the president's diary. There is disappointingly little evidence, however, of Washington's own appreciation of the *creative dimension* of this work; on the contrary, his expressed concern was the city's boundaries and the procurement of deeds from the landowners. Hence, Washington's participation in such changes as were made by L'Enfant in the plan between its presentation to the proprietors and its subsequent development *must remain unknown*. One can only conjecture that L'Enfant made these changes, incorporating Washington's wishes as he understood them. That the plan had secured the measure of approval that would allow it to be translated immediately into building activity is evident.

If detailed response of President Washington to L'Enfant's plan was obscure, the *commissioners* to whom the development of the city was entrusted *were equally silent*. And if Jefferson's sole substantial comment was a suggestion of draftsmanship, the commissioners in commenting on the plan confined themselves to deciding that the federal city should be called Washington, that the streets of the gridiron system should be designated by numbers and letters, that river soundings be specified on the plan. ...

Frederick Gutheim, Worthy of a Nation, 1977 (my emphasis)

Voluminous tomes from the Revolutionary period cover many of the sacred artifacts of the day. The Great Seal of the United States. The Flag. The Liberty Bell. The architectural blueprints for the first Capitol and Mansion. Biographies. Above all, the Constitution, the Bill of Rights, letters, speeches and other formative documents. You can spend a lifetime catching up with the life and times of the Revolutionary Era. But, when it comes to explaining one of the most important physical artifacts the Founding Fathers left to us, the design for Washington, D.C, history is virtually mute.

What we do know for sure is that the final design did not satisfy **Pierre Charles L'Enfant**, the initial designer of the city. He returns to the district in February 1792 after a two-month absence. He gazes on his design that had been revised in his absence by the planning commission. He is in shock. He writes the President.

"[The plan is] now in a state in which it is most unmercifully spoiled and altered from the original plan to a degree indeed evidently tending to disgrace me and ridicule the very undertaking."

How, and why, did this plan satisfy the combined visions of President Washington and the first planning commission? Why was L'Enfant furious with the revisions? Where are the documents that fill this gaping hole? They are missing, lost, hidden?— that is, if they were ever written down in the first place. The only known text that accompanies the plan is found on the document itself, and shares nothing about what the planners envisioned or any hint of its creative dimension. Future planners were left with a plan gridded out by streets and cut by an array of diagonal avenues. It was glorious, yes, but it was also the only document they had to work with.

The profound, geographically-symbolic distance between the Capitol and the White house is at the core of America's National City. It proudly announces to its citizens and to the world that the United States is a republic where no one is above the Constitution, especially the President. As such, the city was organized around the political elevation and the social evolution of the 'People,' and the extinction of the monarch.

Architecturally, was this institutional juxtaposition the only symbolic feature that distinguished Washington, D.C. from its baroque counterparts in Europe? Is everything else about the city a virtual replication of the traditional baroque style?

I am not referring to the subsequent monuments, statues and other built forms of the city that filled the spaces up, but the spaces themselves. The subject of my inquiry was the plan itself—its streets and avenues, their intersections, the reservations for the Capitol and the White House, public parks, and the lots that were put up for sale. The plan is the skeleton of the city. Moreover, the built city was a virtual replica of the official plan on the ground. It is as if the city builders stamped the official design onto the landscape with a huge branding iron with no consideration given to the terrain itself, except for Jenkins Hill. This was L'Enfant's "pedestal waiting for a monument"— the Capitol, ground zero for the new republic.

Washington, D.C. would be the first modern capital city that was built from scratch at the founding of a new nation. It was the opportunity of a millennium. Further, it would be a capital city representing a profound political evolution. You would expect histories, commentaries, an abundance of letters between the original planning members about how their actions and choices attempted to make the most out of this incredible moment—similar, say, to the surviving historical record of the Great Seal committees. You might expect it, but you would be disappointed. As a result, 19th and 20th Century planners and architectural historians have been left to second guess what was in the minds of the plan's creators.

To demonstrate the historical void surrounding the design, up until 1881, the 19th Century planning committees thought the design was the work of Andrew Ellicott, President Washington's surveyor. Why? Because it said so on the official document. L'Enfant's name had been removed, which was another problem the Frenchman had with the revision. Almost a hundred years later, a lost trunk turns up full of L'Enfant's original sketches.

Now it all begins to make sense for the plan's historians. Up until then they could just shrug their shoulders wondering how surveyor Ellicott could have dreamed up such a complicated vision. *L'Enfant! Yes*. His father had been a court artist for King Louis, and little Pierre grew up playing in the gardens of Versailles, later attending some of the finest art schools. And the baroque heritage of the city was certainly on proud display at <u>Versailles</u>, and elsewhere, like Karlsruhe, Germany.

This turnabout revolutionized the thinking about the capital city, culminating in the <u>McMillan Plan of 1901-1902</u>, a national contest that invited architects to submit their visions for a new central core of the city. Both illustrations highlight the <u>Capitol Square</u>.

In 1909, L'Enfant's remains were exhumed from his lowly grave, placed into a casket and then taken to the Rotunda to publicly honor the true author of the city. His remains were laid to rest on a hill at Arlington

Cemetery with a lovely view of his city; a rendition of his original 1791 draft etched onto his gravestone.

The trunk discovery may have answered the question about who dreamed up the initial design of the city. It did not answer why the Frenchman was so upset with the final version. Or that other pressing question: Why was Major L'Enfant's name removed from the 1792 official document?

The 1792 plan was a revision of L'Enfant's draft, which was submitted a couple months earlier. L'Enfant leaves the district for Philadelphia during early December 1791, leaving the agreed-to minor revisions in the hands of George Washington, Thomas Jefferson, Alexander Hamilton and the other commissioners. L'Enfant returns in early February 1792, visits Ellicott to view his now updated design, screams bloody murder

in a letter to the President about the ruination of his design, who then fires the Frenchman and never speaks to him again. The Ellicott 'ruination' is the city we have today.

"Unmercifully spoiled," "disgrace" and "ridiculous" are the words he chose in a letter addressed to the President—to a President he adored and considered a friend, and the president of a nation that he was equally enamored with. This would be *the ultimate project* of the Frenchman's lifetime—designing a national city from scratch at the birth of that nation, a nation about citizen rule and the demise of the monarch. Talk about living a dream!

What made him go off like that?

Most historians write off L'Enfant's powerful critique of the revision, saying that very little was actually changed from his original draft. Instead, they reduce Major L'Enfant's persona to the feisty, highly irritable, petulant French artist stereotype: *Change any little thing, and they blow up. You know how they are.* In 1992, this historic sentiment was cast in stone when *National Geographic's* celebration of the city's Bicentennial declared that, "the plan remains L'Enfant's." This conclusion was reached in spite of the strong evidence to the contrary that was published over a decade earlier.

L'Enfant's Extraordinary City

Since there was no historical mention about the city's pyramid and the two stars, maybe there was something else that would at least entertain a context for their unprecedented presence. Urban street symbols just weren't done in baroque cities or landscapes. Instead, the 18th Century baroque was all about perception.

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The hexagram is a *double tetrakys*. A tetrakys is a symbol going back to the days of Pythagoras. Think of a bowling pin arrangement and you have a tetrakys. Overlap two of them in opposite directions and you have a double tetrakys in the shape of a Star of David, a hexagram. When combined, there are thirteen points, one each for the original states. Campbell mentions that the apex dot of the construction is "the creative center out of which the universe and all things have come."

"So what I suddenly realized when I recognized that in the Great Seal of the United States there were two of these symbolic triangles interlocked was that we now had thirteen points, for our thirteen original states, and that there were now, furthermore, no less than six apexes, one above, one below, and four (so to say) to the four quarters. The sense of this, it seemed to me, might be that from above or below, or from any point of the compass, the creative Word might be heard, which is the great thesis of democracy. Democracy assumes that anybody from any quarter can speak, and speak truth, because his mind is not cut off from the truth. All he has to do is clear out his passions and then speak.

"So what you have here on the dollar bill is the eagle representing this wonderful image of the way in which the transcendent manifests itself in the world. That's what the United States is founded on. If you're going to govern properly, you've got to govern from the apex of the triangle, in the sense of the world eye at the top." [Power of Myth, 1988]

5

In the first versions of the Seal, the stars above the eagle's head were six-pointed; that is, thirteen hexagrams were used to define a larger hexagram. Note that it is only on the finished, engraved Seal where they were first arranged into a double tetrakys. The *sketch* of the Seal shows thirteen unassociated stars above the eagle. In both cases, the stars were given six points. From *American Heraldry.org*:

"The seal seems to be the first depiction of the arms with the stars in the crest arranged to form a larger star. None of the sketches made in the design process show them this way. In addition, just as was the case in the sketches, but contrary to modern practice, the stars have six rather than five points. This was consistent with the manuals on English heraldry used by the designers, John Guillim's Display of Heraldry and Mark Anthony Porny's Elements of Heraldry, both of which insisted that stars (or estoiles, as they are known in heraldry) should have six points unless otherwise specified, and in any case must have no fewer than six. English usage refers to the five pointed object as a mullet, and considers it as representing the rowel of a spur. Such stars of six or more points were quite common on early American flags as well, and were even used on

some U.S. coins on into the 20th century. Finally, the eagle is shown with a small feather crest on its head. This is the traditional heraldic way of emblazoning an eagle, even though the actual American bald eagle has no such crest."

6

Jennings, Sibley

1979 Artistry as Design: L'Enfant's Extraordinary City. Quarterly, vol. 36, no.3: 225-78

Gutheim, Frederick

1977 Worthy of a Nation: The history of planning for the national capital. United States Government Printing Office, 1977

McHarg, Ian

1969 Design with Nature (Garden City, N.Y; Natural History Press)

7

"L'Enfant requested Amsterdam, Paris, London, Madrid, Naples, Genoa, Florence, and Venice. Jefferson responded by sending maps of Amsterdam and Paris, along with others not requested: Frankfurt, Carlsruhe, Strasburg, Orleans, Bordeaux, Lyons, Montpelier, Marseilles, Turin, and Milan. Jefferson informed L'Enfant he would not assist him in obtaining the others and that "he would forego his ideas on the subject of the town as he was sure that the president had already 'interwoven' such ideas of his as 'the P.' approved." Jennings: p. 274.

Jennings points out that five of the eight cities requested by the Frenchman were cities from southern Europe, and that London and Paris had fallen under the sway of the southern style. The design of shortened avenues was geographically commensurate with the southern clime of the federal district.

8

Berg, Scott

2007 Grand Avenues: The Story of the French Visionary Who Designed Washington, D.C. Pantheon Books: Toronto

9

"We find magic wherever the elements of chance and accident, and the emotional play between hope and fear, have a wide and extensive range. We do not find magic wherever the pursuit is certain, reliable, and well under the control of rational methods."

- Bronislaw Malinowski

Below is the editor's introduction to G. Gmelch's classic paper, Baseball Magic. It summarizes the differences between religious and magic from an anthropological perspective, and provides a possible theoretical approach for investigating the nature, meaning and intent of the geometric features outlined in this book. The article itself demonstrated how magic, ritual and fetishes are alive and well among baseball players.

The anthropologist Bronislaw Malinowski lived among and studied the people who had long lived on islands in the south Pacific Ocean. He observed something intriguing about their behavior when they went fishing.

If the people went fishing in the dangerous, turbulent, shark-infested waters beyond the coral reef, they performed specific rituals to invoke magical powers for their safety and protection. But if the people went fishing in the calm waters of a lagoon, they treated the fishing trip as an ordinary event and performed no rituals or ceremonies. Why did they use magic in one situation but not the other?

Malinowski concluded that humans are more likely to turn to magical or occult powers when they face situations where the outcome is important and uncertain, beyond their control (as with sharks). Magic was used for situations when chance or luck matter a lot.

Belief in magic is common in a modern industrial societies like the United States: for example the belief in a lucky rabbit's foot, St. Christopher medal, lucky number, and other good luck charms.

Magic is similar to and overlaps with religion, but they are different. Both magic and religion involve beliefs and practices about powerful, invisible supernatural forces. Religion worships, honors or seeks to please the God, Gods, or other supernatural forces. Magic doesn't worship or honor supernatural forces, it merely uses them – for example, to avoid sharks and death, to make money when gambling, or to get good grades. (Gmelch, George. 2008 "Baseball Magic." In Conformity and Conflict: Readings in Cultural Anthropology, Special ed., Spradely and McCurdy. Allyn & Bacon, 2008, Chapter 13.)

What are five stars wrapped up in an octagon doing north of the White House? And why is the structure so large compared to the other features?

If Freemasons believe that the north and the northwest symbolize malevolent influences, did it require a relatively large embedded symbol as a means of protection for the White House? If it was a protection device, did it only come about as a response to President Washington's location for the White House?

For the sake of argument, let's assume the Masons and non-Masons agreed on the Pyramid-Eye feature in the Mall, and that the White House had to be separate from it. There was only a river on the south side of the pyramid, hence no room for the Mansion in a more symbolically amenable location. The Mansion had to be located in the northwest quad. This was the "cost" of the pyramid feature, which was a non-denominational symbol, so to speak – it had to be placed in a geographically negative place. For the Freemasons, perhaps there was a felt need for a large symbolic feature(s)

designed to counter that attraction of negative influences that might harm the White House, perhaps the city as a whole. They arranged a barrier of stars that reached across the northern half of the city. Perhaps the scale is so much larger than the other features given the emphasis on the danger and criticality symbolized by the north.

10

Hieronimus, Robert, and Laura Cortner

2006 Founding Fathers, Secret Societies: Freemasons, Illuminati, Rosicrucians, and the Decoding of the Great Seal. Destiny Books

2008 The United Symbolism of America: Deciphering Hidden Meanings in America's Most Familiar Art, Architecture, and Logos. New Page Books, NJ.

11

"Diabolical" was President Washington's word to describe the Illuminati. The Founders were well aware of the evil influences of Europe infiltrating the new nation. They predicted it. They warned us about it. It is not a secret. The Founders knew about 'divide and conquer,' blackmail, and all the other sneaky, nefarious ploys that empowered the Illuminati types behind the scenes. Mr. George Washington Snyder had sent President Washington a book on the Illuminati conspiracy bent on destroying the religions and governments of Europe, and he warned, that they were infiltrating America through Masonic lodges. The President agrees the infiltration might be going on, but he is satisfied that the corrupting influence of the Illuminati had not yet reached institutional levels among the Lodges.

To Mr. Snyder.

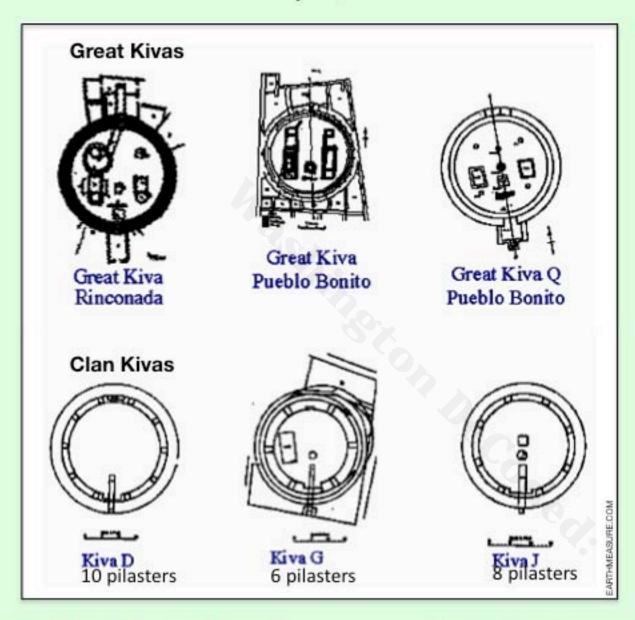
It is not my intention to doubt that the doctrine of the Illuminati and the principles of Jacobinism had not spread in the United States. On the contrary, no one is more satisfied of this fact than I am. The idea that I meant to convey, was, that I did not believe that the Lodges of Free Masons in this Country had, as Societies, endeavoured to propagate the diabolical tenets of the first, or the pernicious principles of the latter (if they are susceptible of separation).

[George Washington: letter to George Washington Snyder, October 24, 1798, Mount Vernon, in The Writings of George Washington, vol. 20, p. 518. Also, "George Washington: Farewell Address," September 17, 1796, in George Washington: A Collection, W.B. Allen, ed. (521)]

When the Great Seal and the National City were drawn up, the Illuminati had yet to achieve a controlling foothold in the American Lodges. Instead, the founding fathers followed another philosophy, best summarized by The *Scottish Rite Creed*.

Human progress is our cause, liberty of thought our supreme wish, freedom of conscience our mission, and the guarantee of equal rights to all people everywhere our ultimate goal.

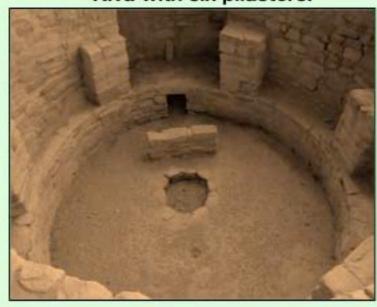
Anasazi Kiva Geometry, ca. 1100 AD Chaco Canyon, New Mexico



Clan kivas of Pueblo Bonito

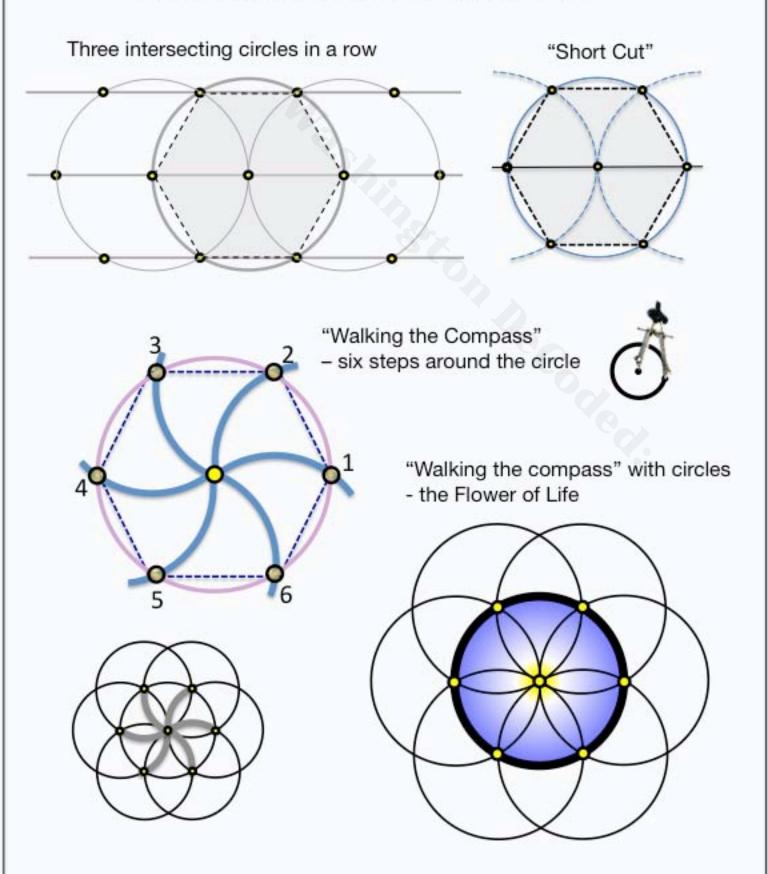


Kiva with six pilasters.



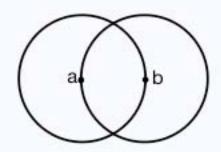
Making Hexagons

The intimate connection of the circle and radius to the perfect triangle and hexagon is instantly apparent.

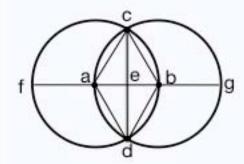


Rules Of Sacred Geometry

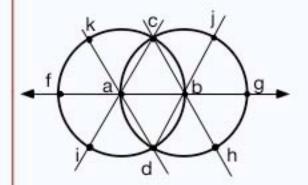
The Vesica Piscis is a construct of two circles sharing the same radius. It is the perfect model for demonstrating the rules of the geometry. After the first two points, you never invent another point. All subsequent points are generated wherever an intersection occurs.



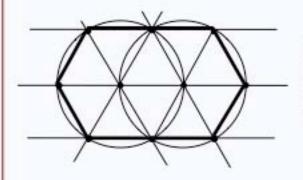
Any two points are a potential radius for a circle.



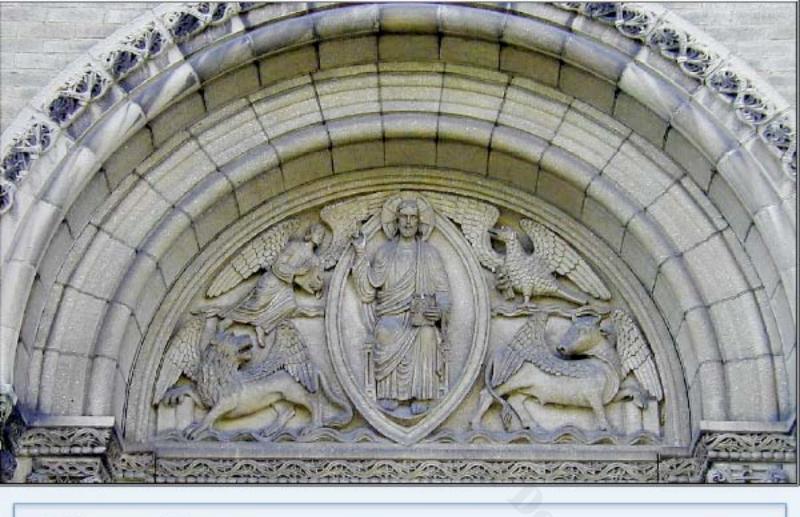
Any two points are a potential line segment.

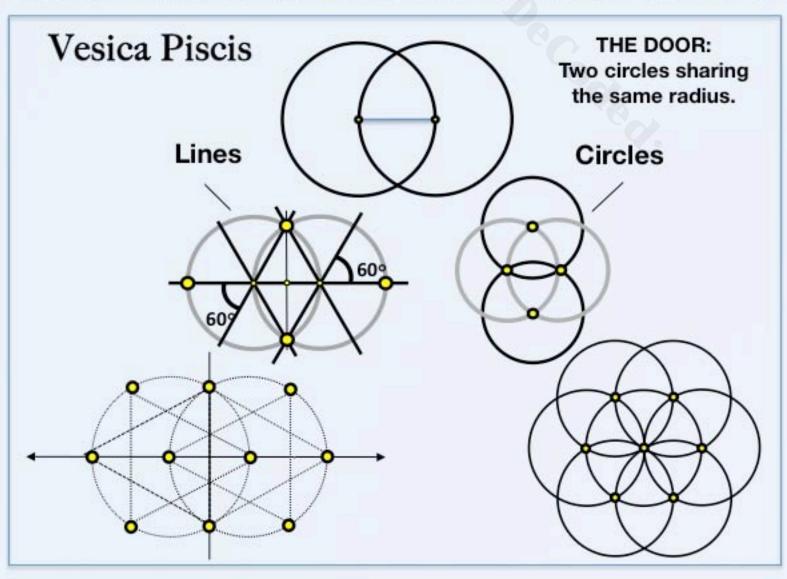


Any line segment is a potential line, extending indefinitely in both directions.

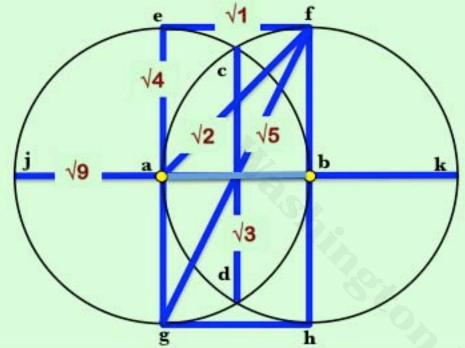


New points are generated at the intersections of lines and arcs. Look for unintended consequences. In this case, a pair of 3-D cubes.





Unintended Consequences The Proportional Constants of Sacred Geometry



 $ab = 1 = \sqrt{1}$

ef = √1

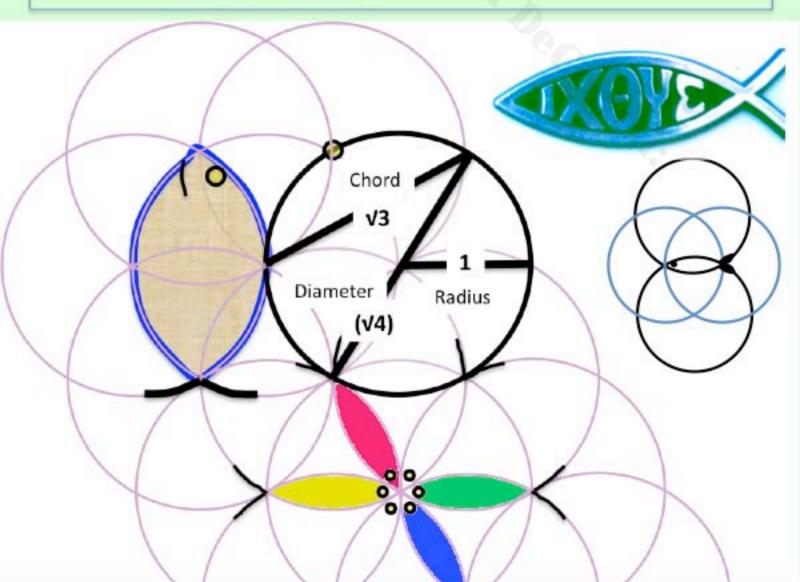
 $af = \sqrt{2}$

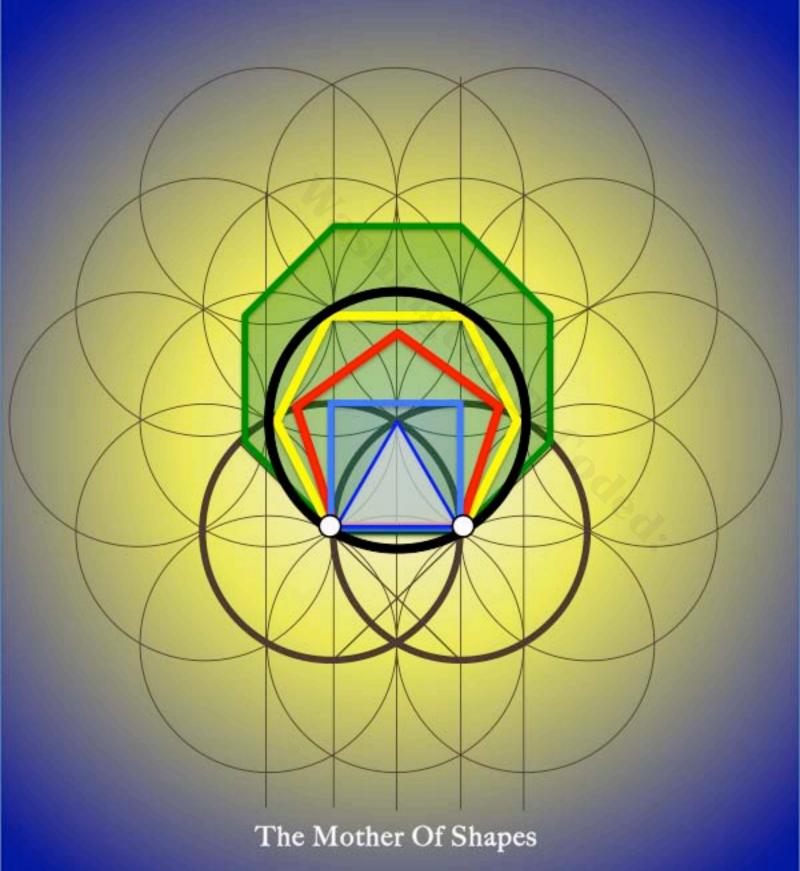
 $cd = \sqrt{3}$

eg = $\sqrt{4}$

fg = $\sqrt{5}$

 $Jk = \sqrt{9}$



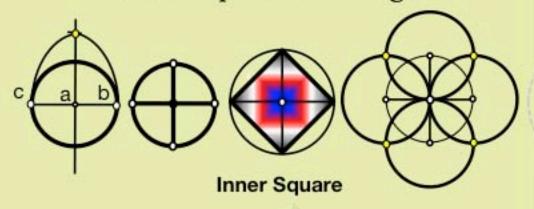


Symbolic Secrets

Hexagonal Family Of Designs

Every nine year old could do this.

From Square To Octagon





Outer Square

The Family Square



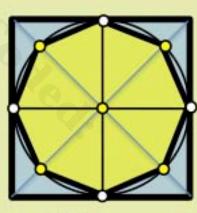




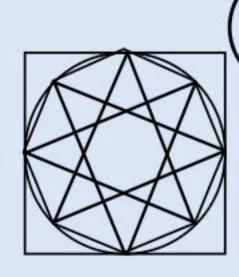


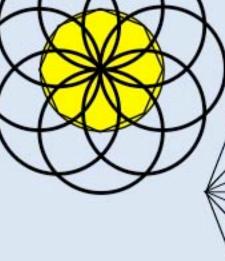


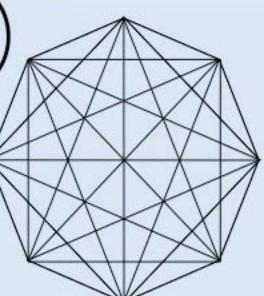




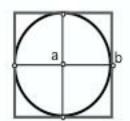
Octagon







Pentagon and Decagon



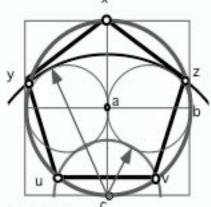
 Given: Quartered Circle A and its outer square.



Diagonals bisect the radius.



3. Two circles with 1/2 the initial radius

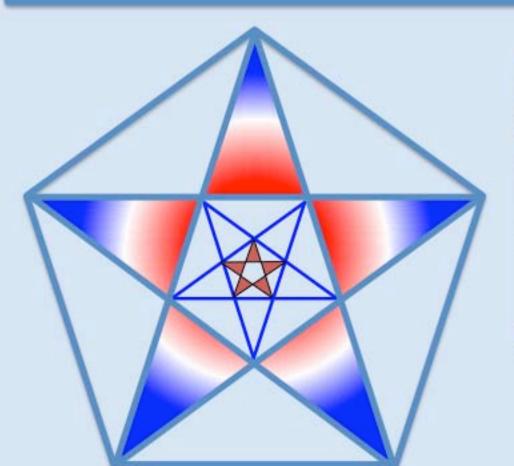


cy/ab = phi: 1.618... cu/ab = 0.618...

xy/ab = 1.175...

Truncation: the Decagon.

4. The radii from "c" to the points tangent to the small circles generate arcs that intersect Circle A at four points: u, v, y, z. Line segment "cy"/ radius "ab" is phi (1.618...). The side of a pentagon / radius "ab" = 1.175....



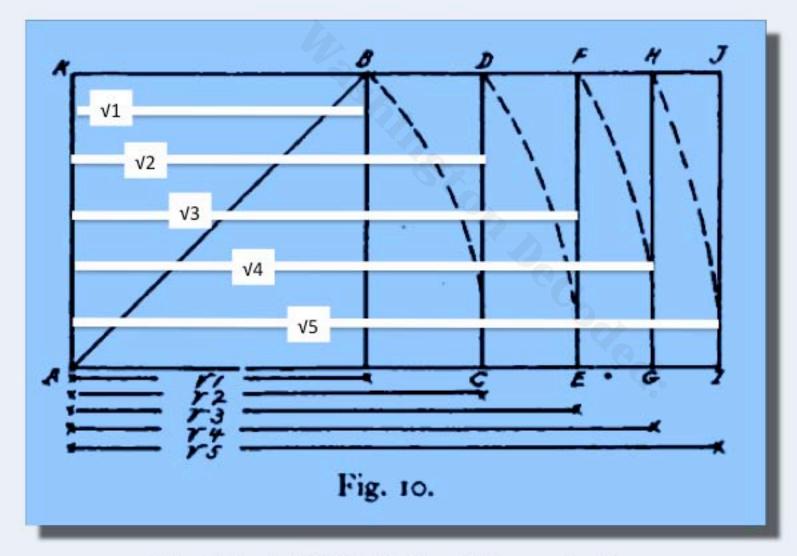


The Medal of Honor

EARTHMEASURE.COM

Dynamic Rectangles

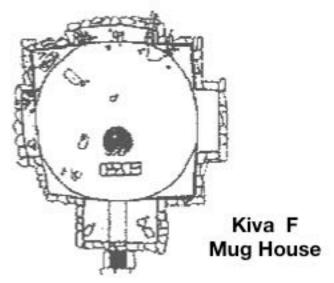
A technique for generating a series of rectangles with square root lengths. Is this where Pythagoras discovered his theorem?



"Hambidge's 1920 illustration of the construction of root rectangles. The lengths of the horizontal sides of the original square and the four root rectangles derived from it, are respectively: sqrt{1}, \sqrt{2}, \sqrt{3}, sqrt{4}, \sqrt{5}."
[Wiki Commons]

The Square and the Octagon





Circular floor with outer square.





Great Kiva Floor Plans and Roof Construction Are Derived From The Square

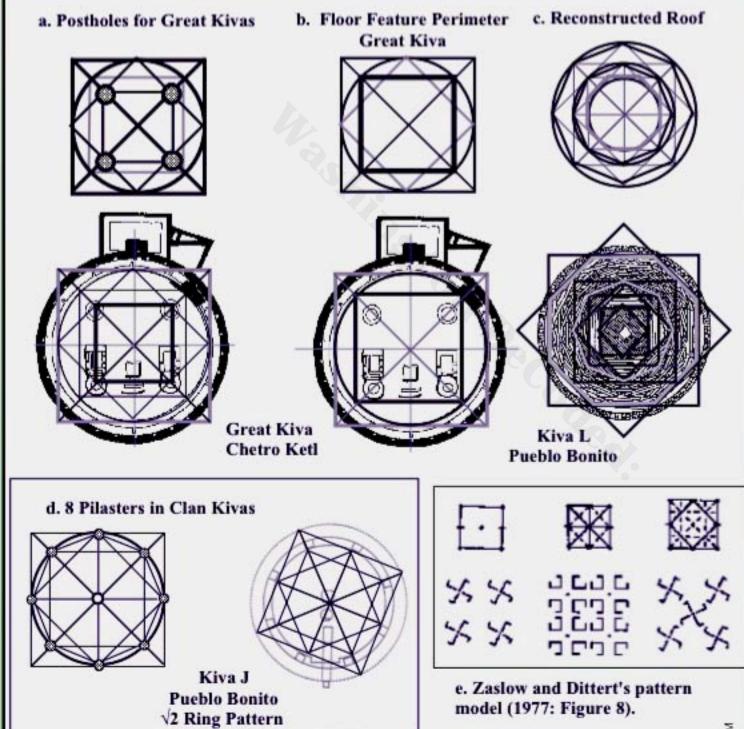
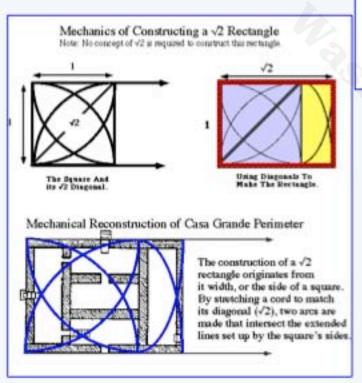
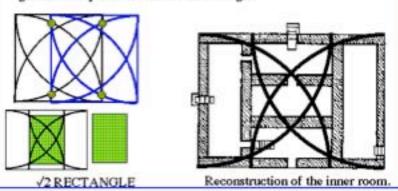


Figure 6. Alternating Squares And Circles
A Family Of Designs Based On √2

The Casa Grande is a 1/2 rectangle. Its internal organization was designed using the same arcs that outlined the structure. The inner rooms are smaller scales of the original rectangle.



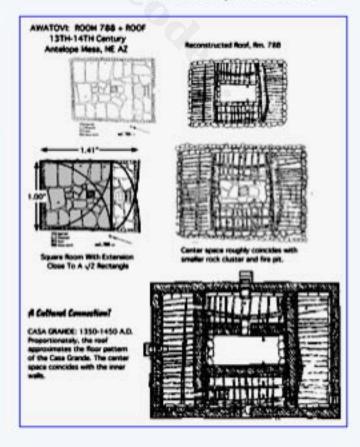
The inner room of the structure, also a $\sqrt{2}$ rectangle, may hold further evidence that this methodology may indeed reflect prehistoric design practices. A simple extension of the previous technique not only defines the inner room, but appears to determine the width of the wall. Once the rectangle is set, define another square from the opposite end. Crisscrossing arcs generate the points of another $\sqrt{2}$ rectangle.



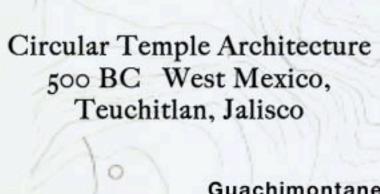
CASA GRANDE Floor Plan: A √2 Rectangle Casa Grande, Coolidge, AZ. Hohokam: Late Classic, ca. A.D. 1350-1450 CASA GRANDE Perimeter Measures South side: 42'3" ft (507") North Side: 42'7" ft (511") 42.35 East Side: 58'5"ft. (701") West Side: 59'3" ft (711") Range of Length/Width ratios fall within 97% of \$2 (1.414225941...) Approximate size generated Groundplan dimensions by autosize program. 59.31 ft / 42.35ft = 1.40047225502 Inner Room 36.12 ft / 25.51 ft = 1.41591532732

The roof design of a room at a site hundreds of miles to the northeast of Casa Grande proportionately mirrors the floor pattern of the "big house."

As above, so below?



Native American Geometry http://earthmeasure.com 1990





CONJUNTED NO. 5.



Guachimontanes Site Map

10 Platforms

CONJUNTO No

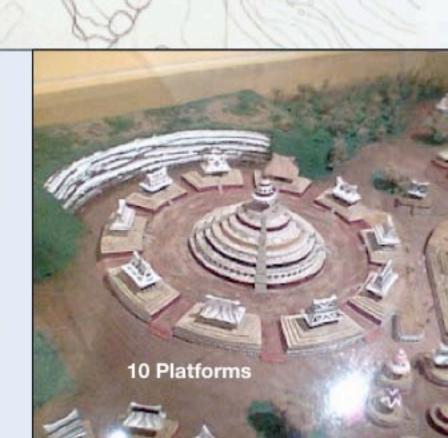
12 Platforms?

8 Platforms

SQALILINITO No.

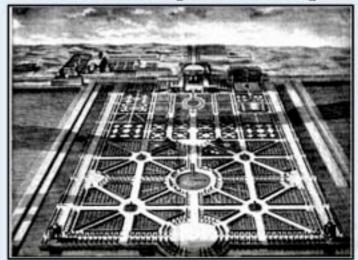
Platform arrangements echo the divisions of the kiva pilasters, but on a huge scale. The larger, eroded complex probably displayed twelve platforms (above).

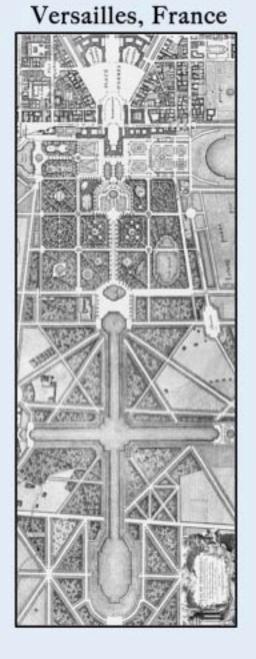
> Model of a temple with ten platforms.



Classic Baroque Landscapes of Europe

German Baroque Landscape





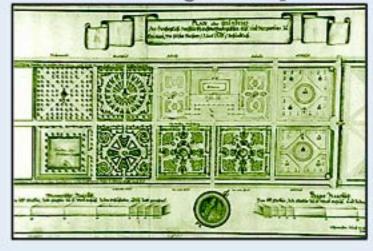
Karlsruhe, Germany

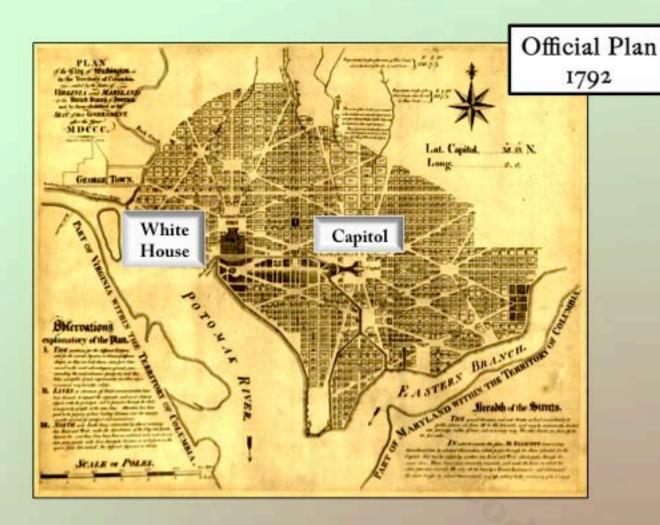


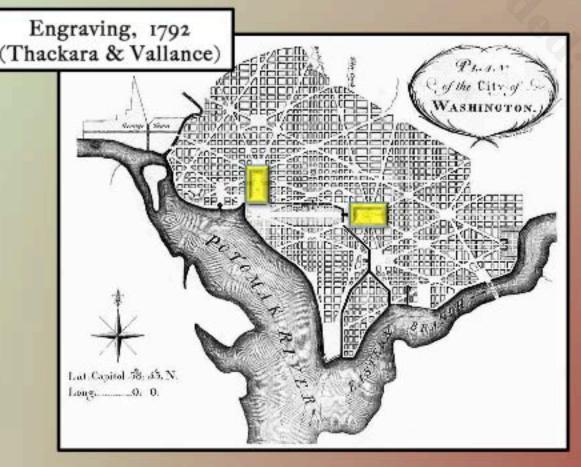
English Baroque Landscape



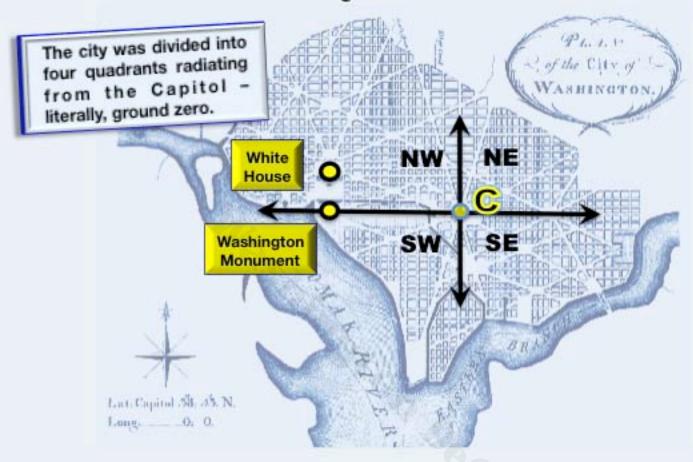
Italian High Baroque

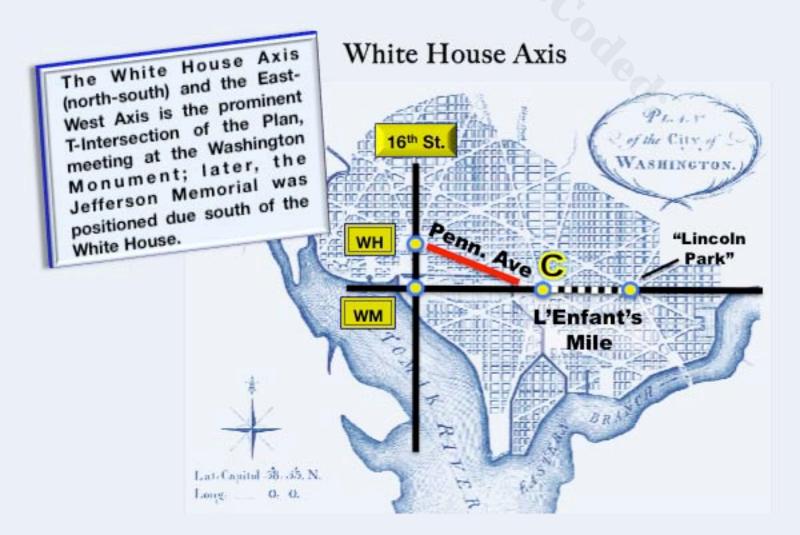






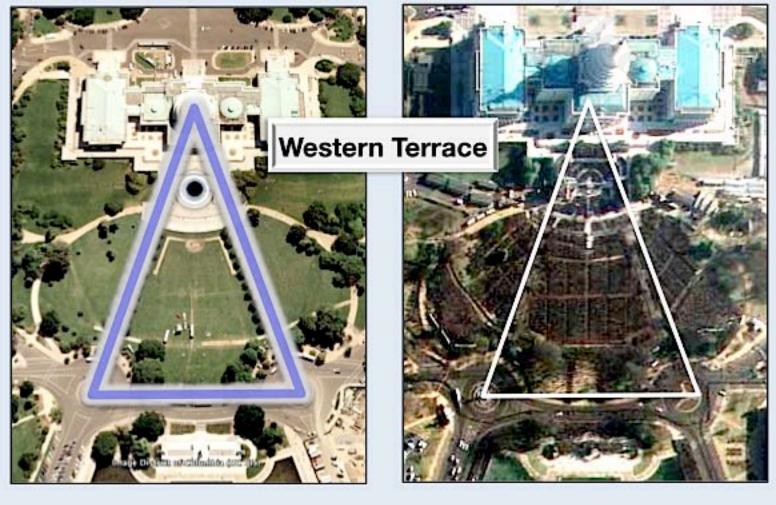
The Four Quadrants



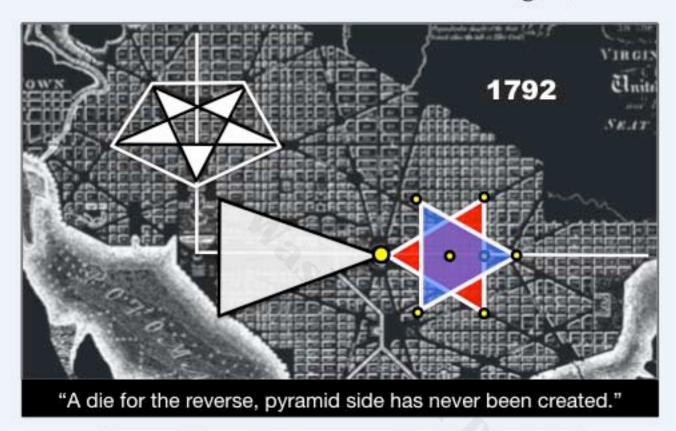


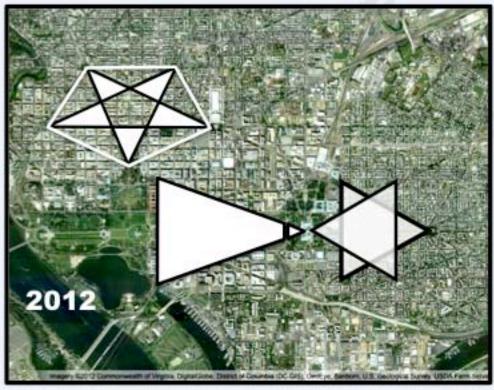






Geometric Features in the Plan for Washington, D.C.





Is it beyond reason to propose that the creators of the city inserted national symbols into the plan? While the die for the reverse side of the Great Seal was never officially cut, the pyramid's realization in the central core might represent the same function, but on a massive scale.





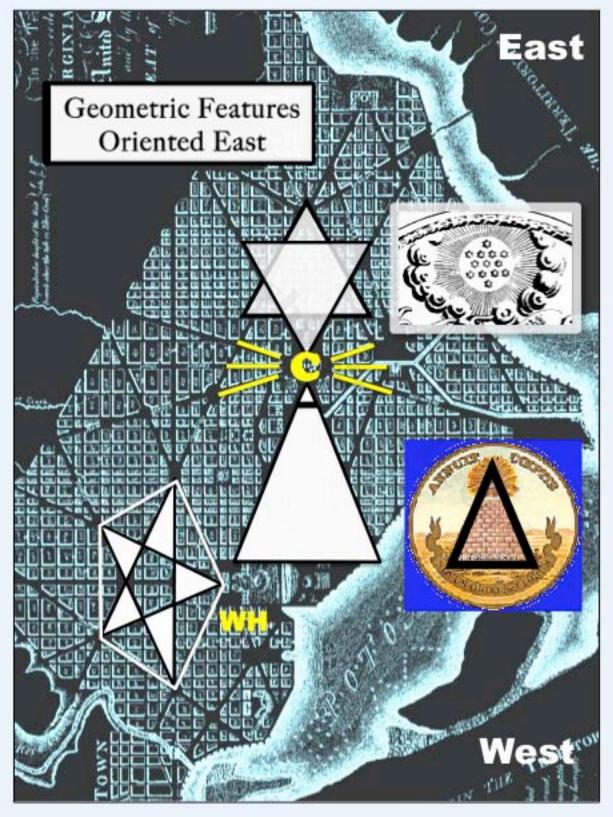
Third Committee Sketches June 1782

FIRST GREAT SEAL 1782





"The first die was cut three months later, and on September 16, 1782, the Great Seal was impressed on a document for the first time. (That die was the obverse, eagle side. A die for the reverse, pyramid side has never been created.)" GreatSeal.Org [my emphasis]

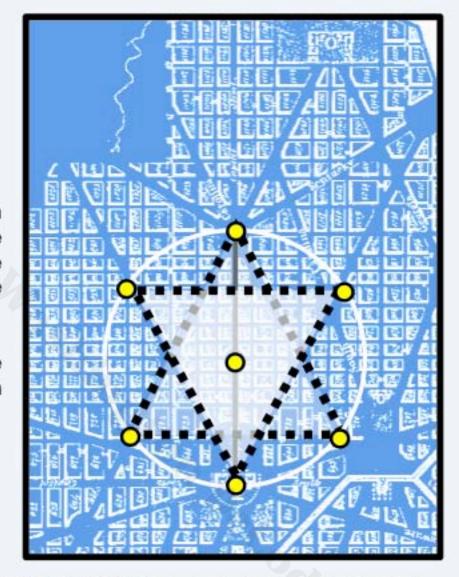


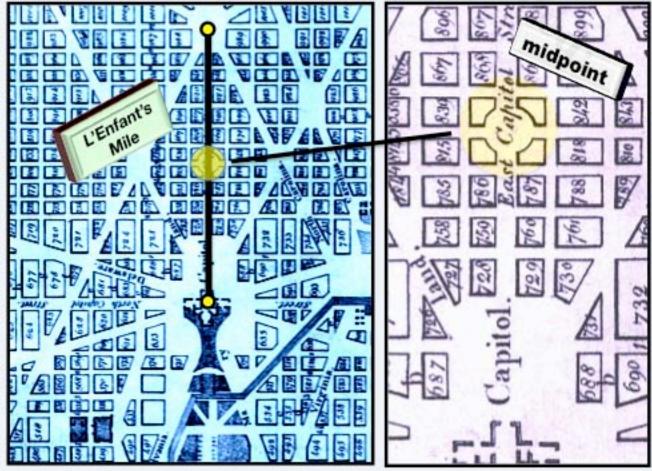
Two defined geometric shapes reflecting the Great Seal are located along the east-west axis of the city. The pyramid is on the reverse side of the Seal, and the hexagram is on the obverse, in the crest above the eagle. Perched in between: the Capitol. The squat White House pentagram was not a national symbol nor a perfect pentagram.

The Hexagram and Its Midpoint

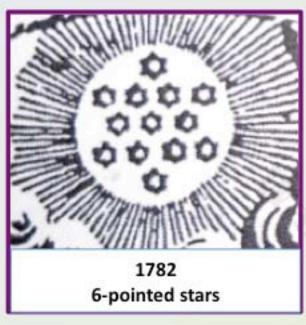
The center of the hexagram (and its implicit circle) is the midpoint of the L'Enfant Mile between the Capitol and the future Lincoln Park.

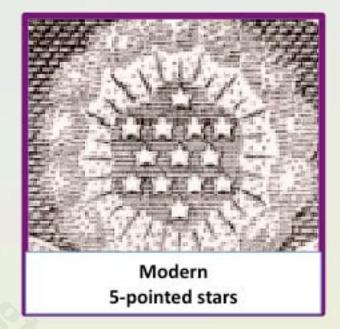
On the Ellicott version the midpoint is embellished with a circle inside a square.

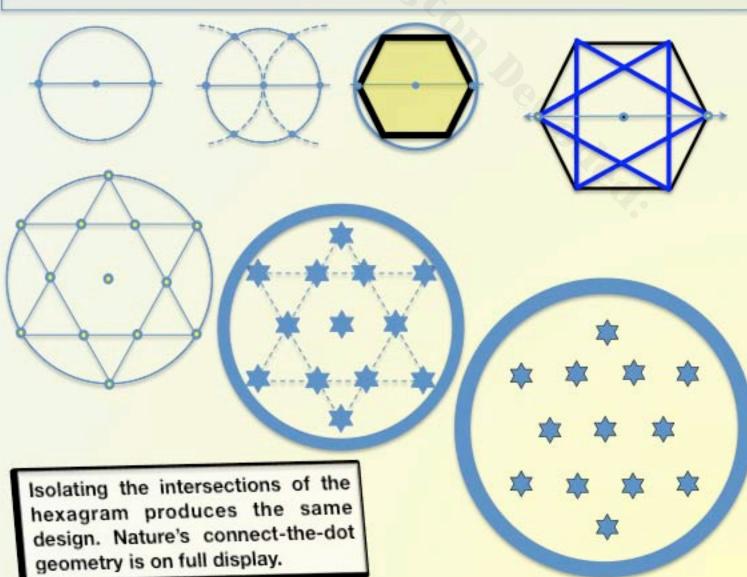




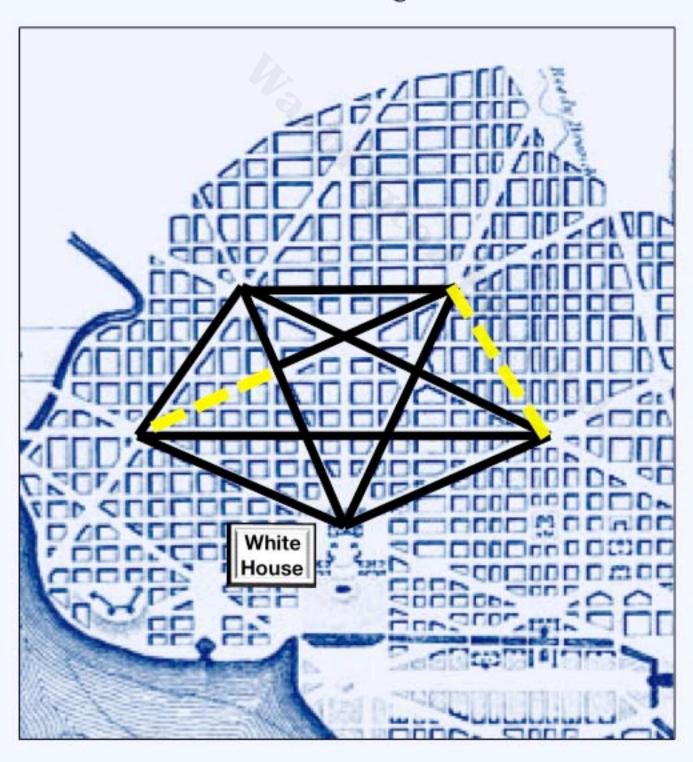
The Star Hexagram of the Eagle's Crest

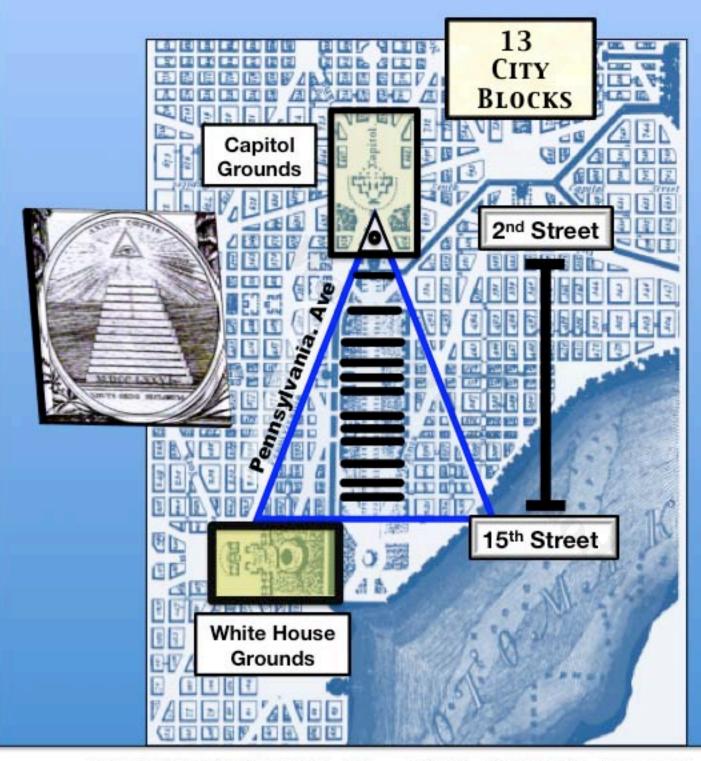






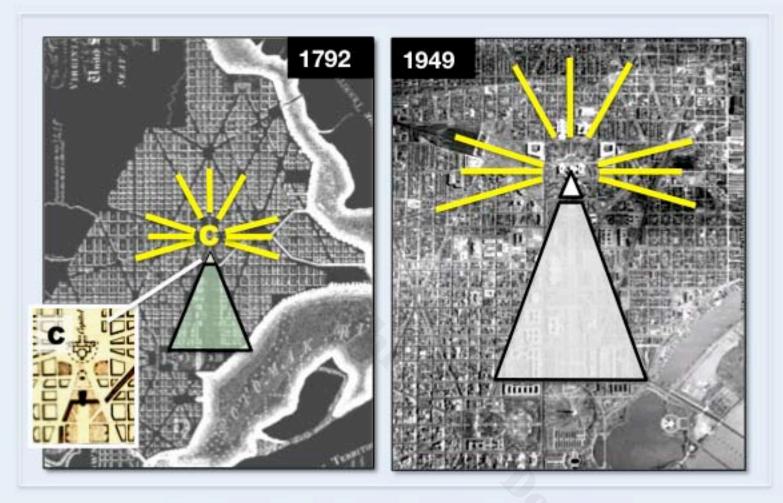
The White House Star-Pentagon Complex and its missing links.





between the Capitol Grounds and the White House Grounds. This matches the thirteen ranges on the Great Seal's Pyramid. Pennsylvania Avenue is the route taken by the President after he is inaugurated at the Capitol.

Pierre L'Enfant's proposed route was down the middle of the National Mall to the monument, turning right to the Mansion. The monument was envisioned as George Washington astride a horse facing south.

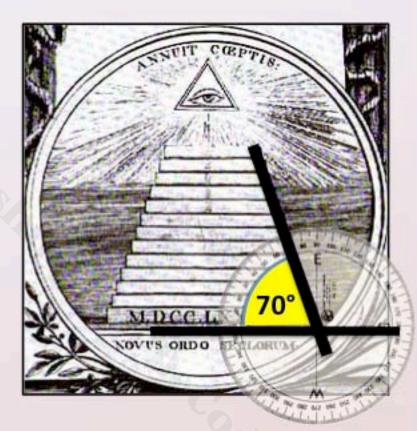


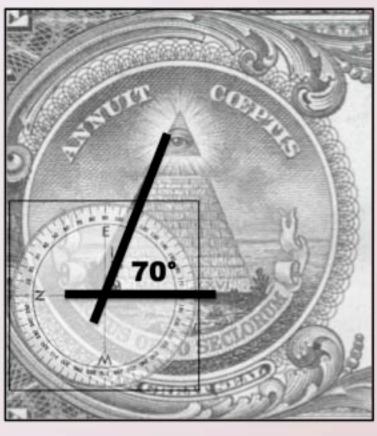
The Pyramid—in the City and on the Great Seal



The Pyramid's Triangle

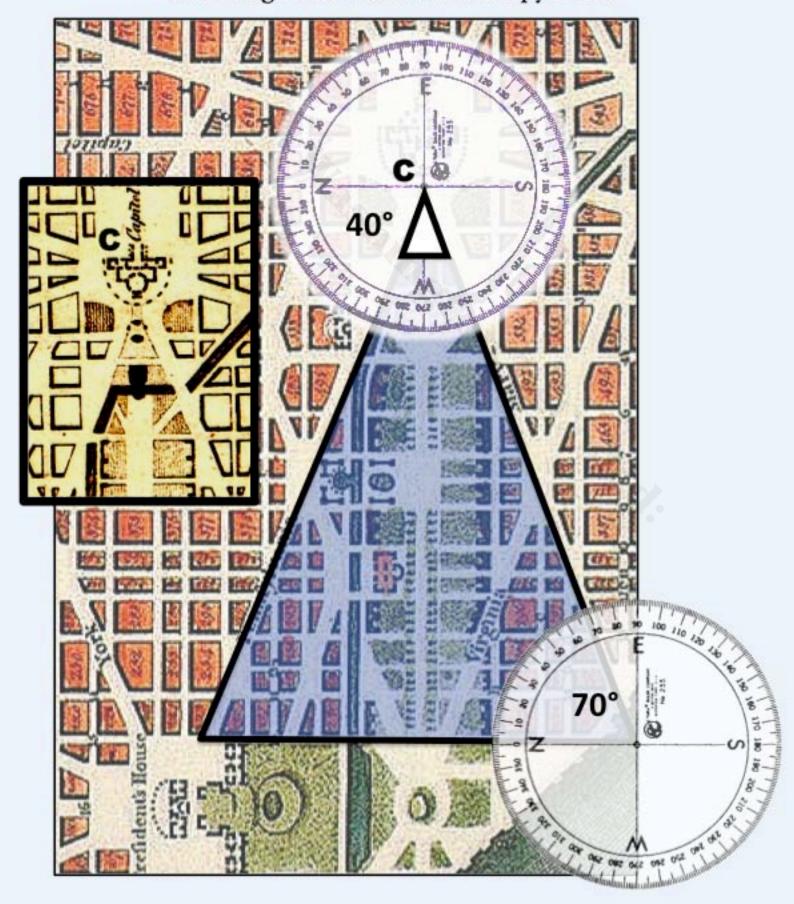
The triangle of the pyramid face has remained consistent over the centuries. Styles change but the degrees remain virtually the same. The "70-degree" base angle is within a degree (+/-1°).

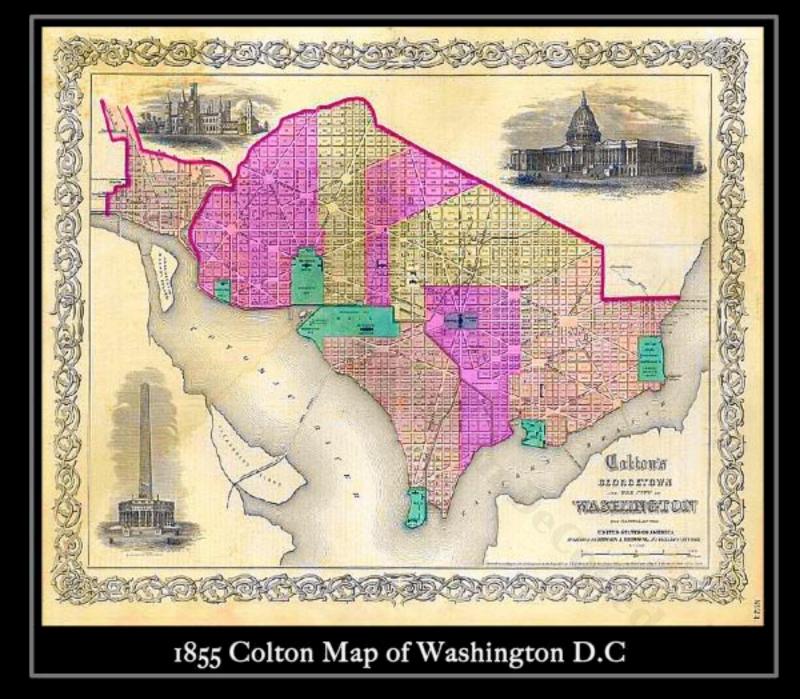




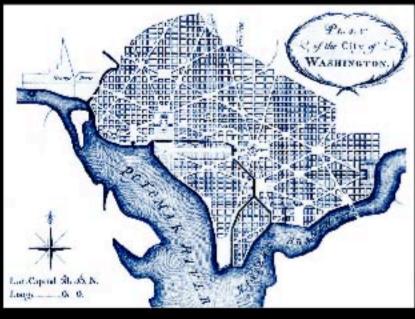


The triangle in the National Mall has the same angles as the Great Seal's pyramid.





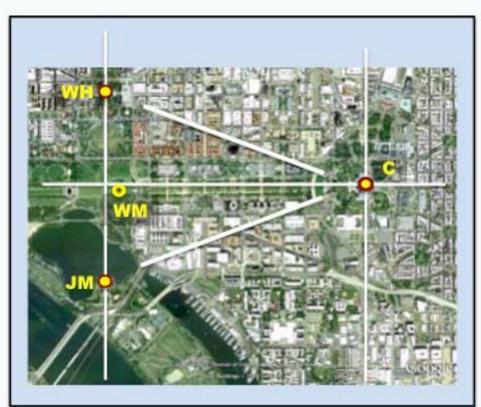
The official 1792 plan was faithfully realized on the ground in the 19th Century, decades prior to learning of Pierre L'Enfant's involvement.



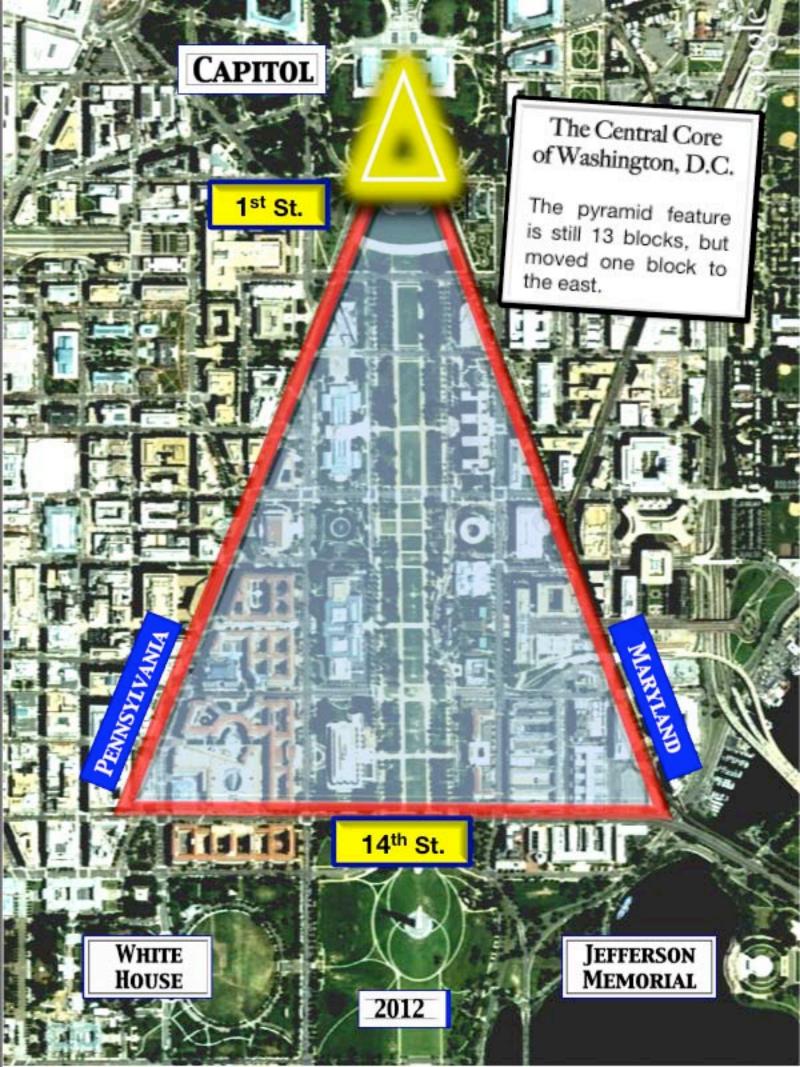
Primary Axes of Washington, D.C., Today



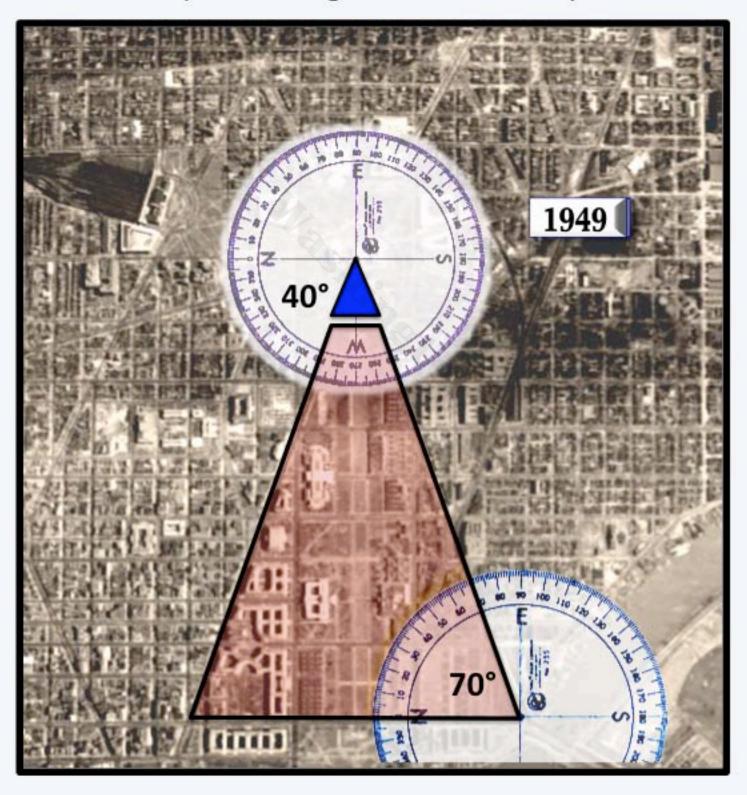
The perfect symmetry of the Plan was corrupted when the geology at the WM intersection was found too weak to support the weight of the huge obelisk.





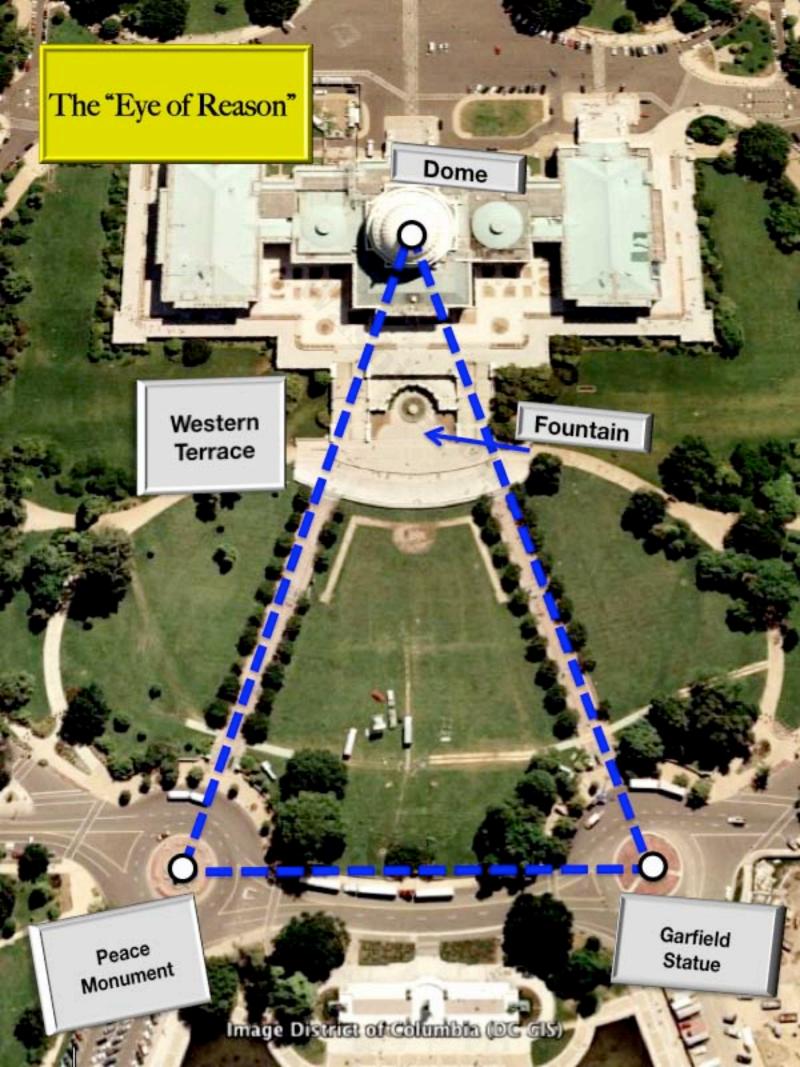


Pyramid's Angles in the Built City



Richard Hoagland, director of The Mars Mission, cites a 39° angle for the apex; if that is exact, the base angle for the pyramid is 70.5°. My reading was roughly 40°.

Even allowing for the federal close enough factor, we find a triangle proportionally consistent with the Great Seal's pyramid in the heart of Washington, D.C.



THE WESTERN TERRACE

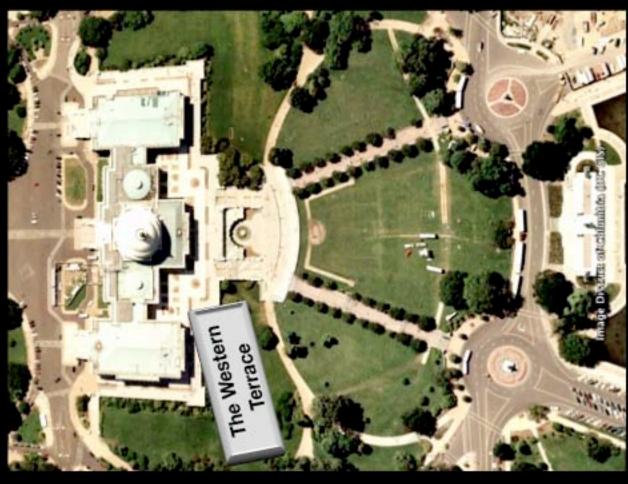


The Western Terrace Fountain

The center of the fountain was once occupied by a statue of the first Chief Justice, John Marshall. Currently the Western Terrace serves as the site for the Presidential Inauguration.

Capitol West, Then and Now





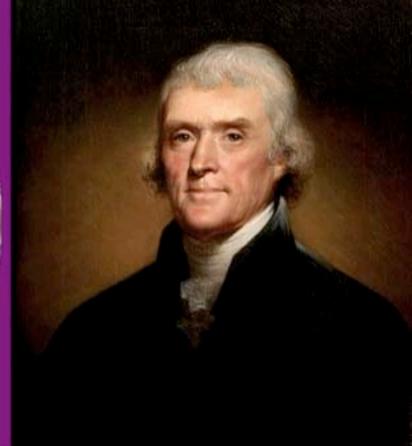


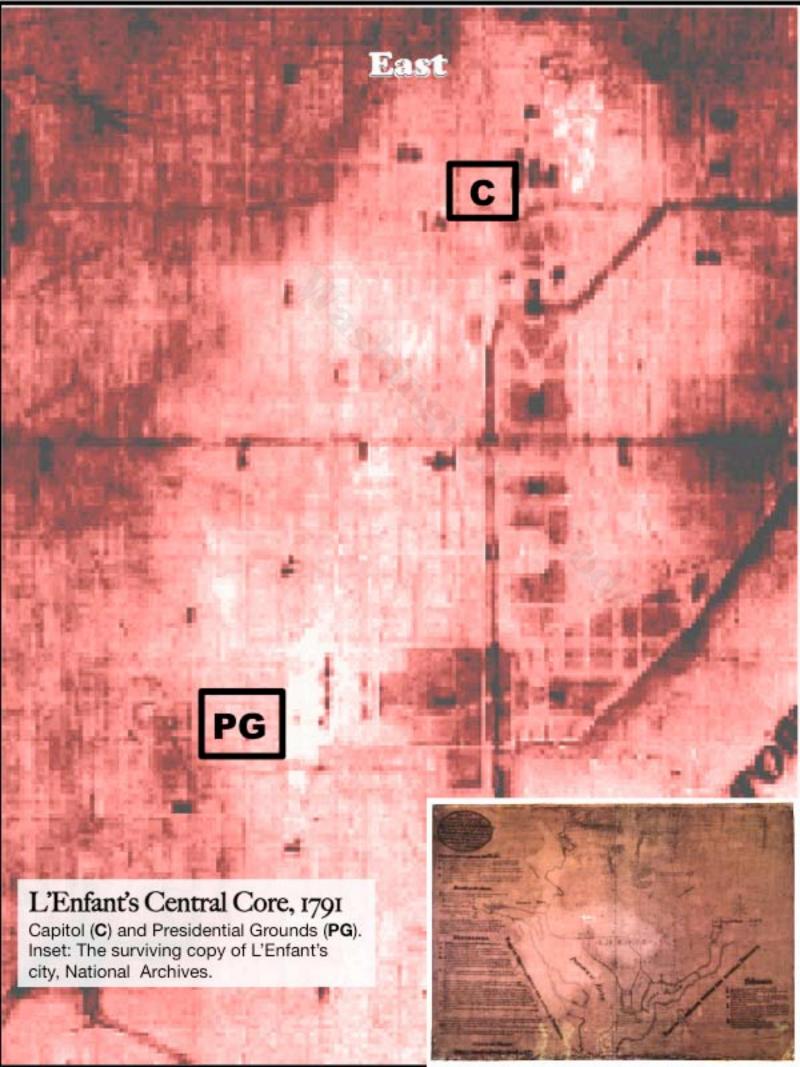
George Washington Andrew Ellicott



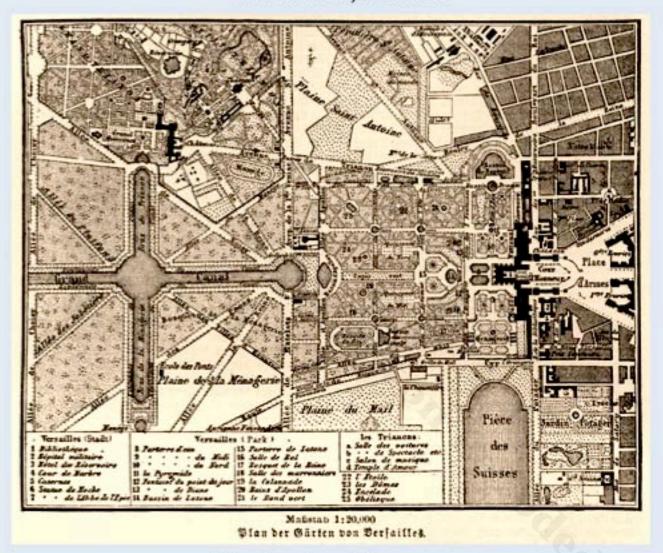
Pierre Charles L'Enfant Thomas Jefferson



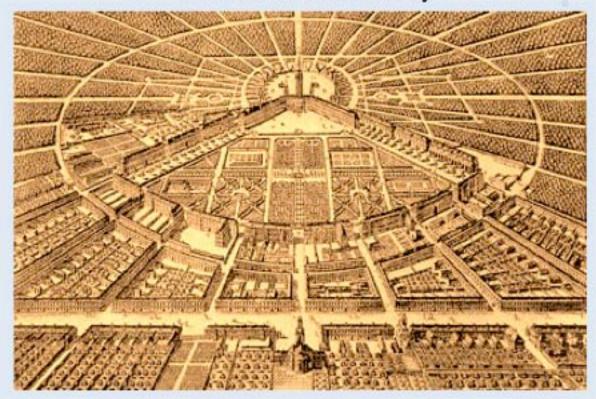




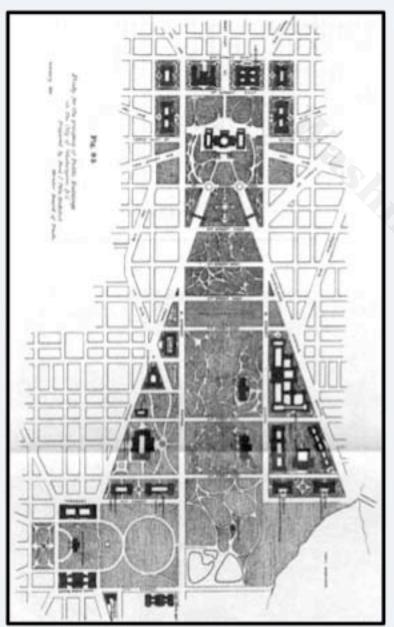
Versailles, France

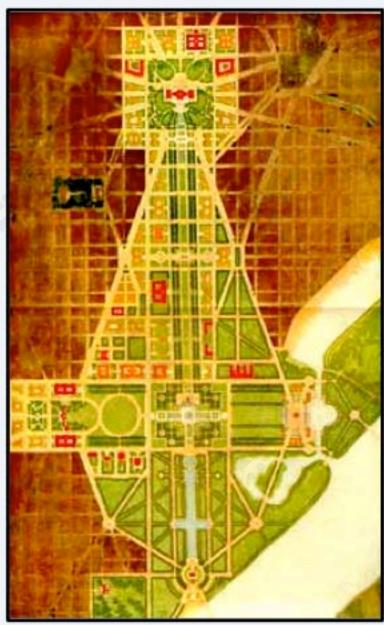


Karlsruhe, Germany

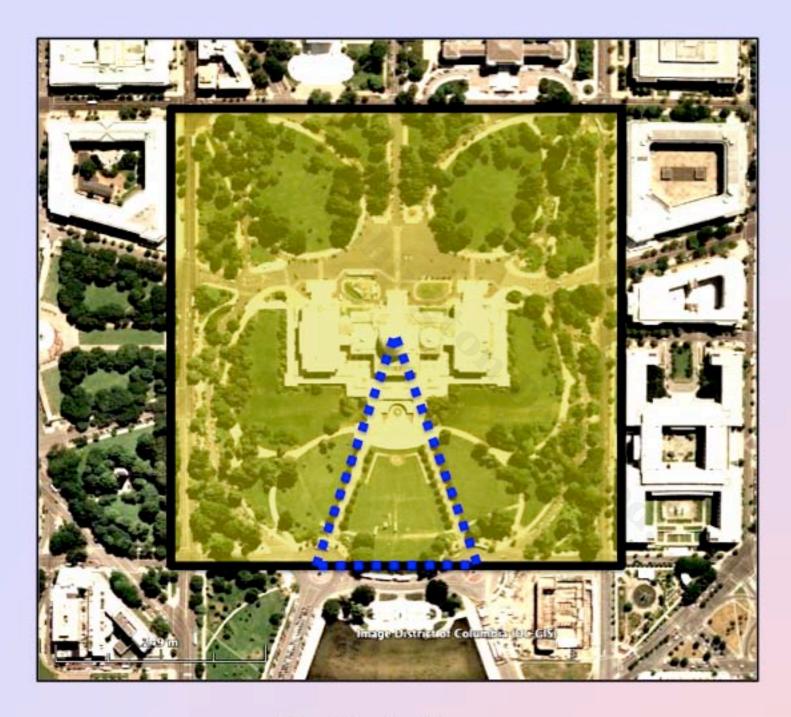


Visions For a National Mall McMillan Commission Plan of 1901-1902

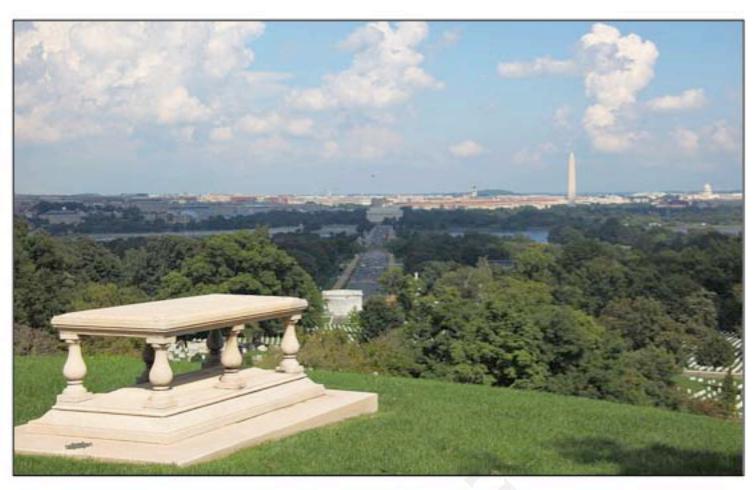




The discovery of L'Enfant's authorship of the federal city inspired many new ideas for the Mall. The above visions at the turn of the last century clearly delineate the 70-degree triangle. The Capitol Square is also emphasized. On the McMillan "Kite" design (right), rays of light emanate from the Capitol. Also, rather than a kite, the image brings to mind a trowel, a popular Masonic icon.



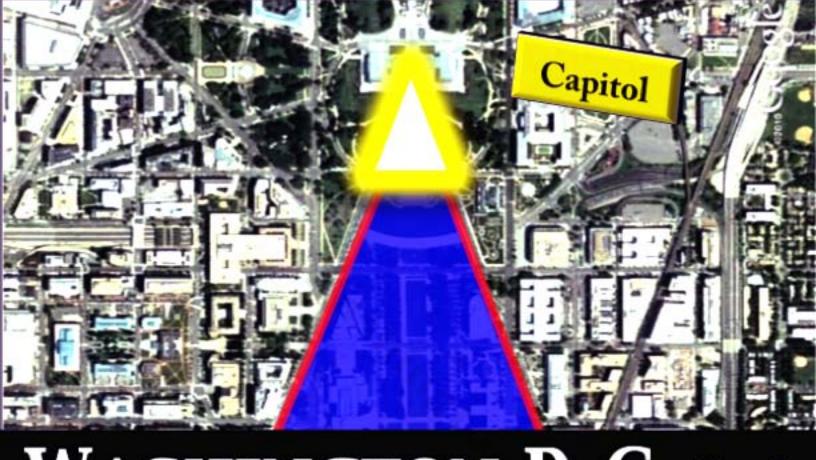
The Capitol Square



Pierre L'Enfant's Tomb at Arlington House overlooking the City.

A facsimile of L'Enfant's 1791 draft on his gravestone.





WASHINGTON DeCoded

A New View Over the Capitol

