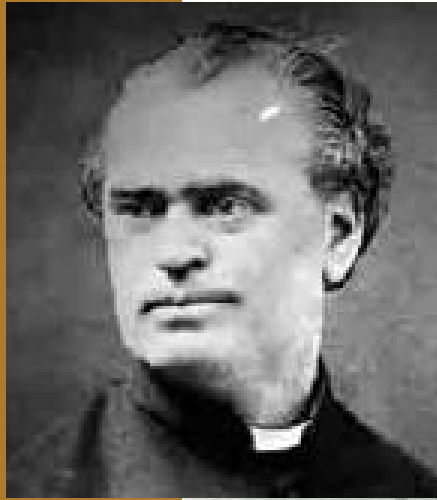


Restoring the Cathedral



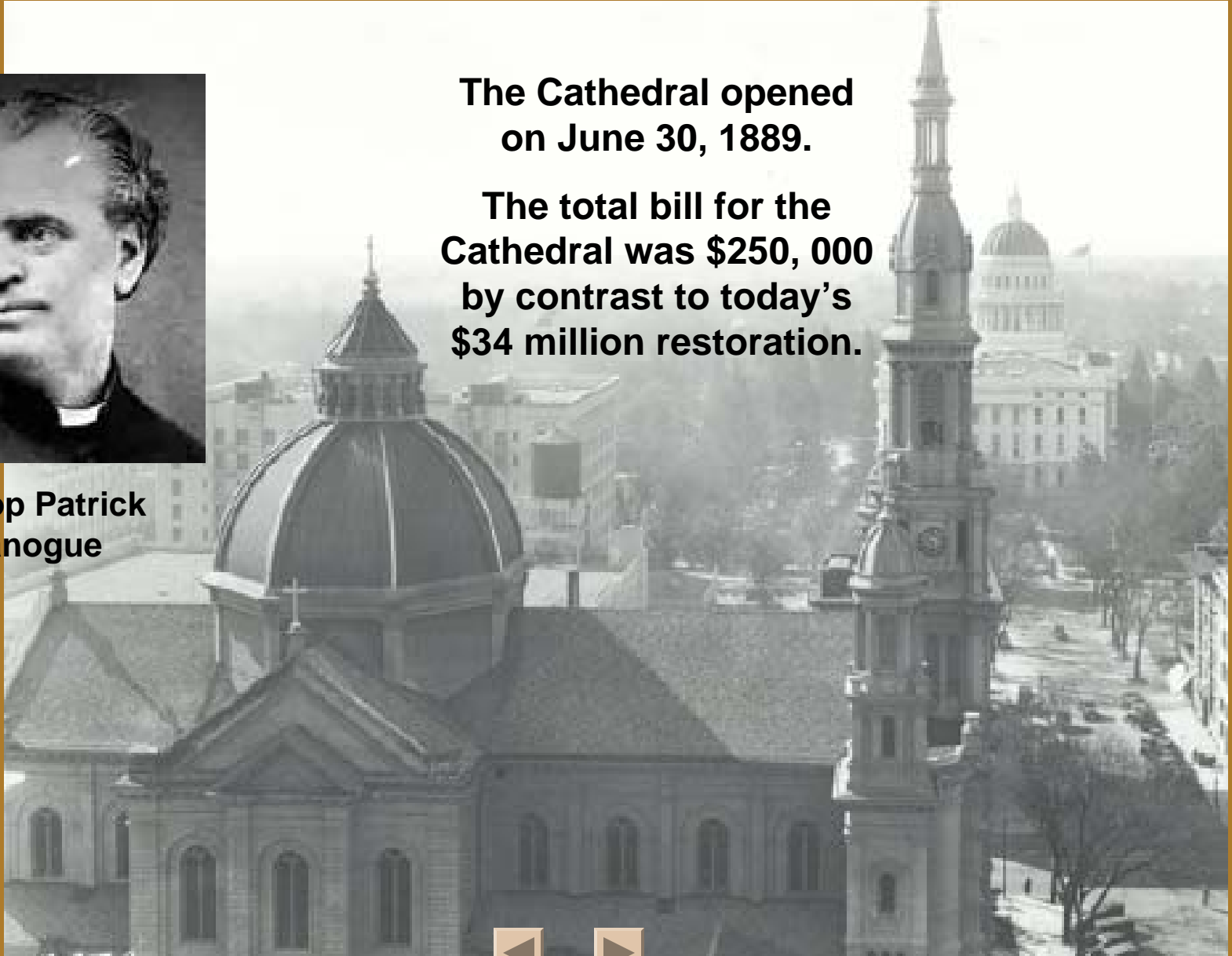
Slideshow by Denise Fracchia,
Cathedral Docent



**Bishop Patrick
Manogue**

**The Cathedral opened
on June 30, 1889.**

**The total bill for the
Cathedral was \$250, 000
by contrast to today's
\$34 million restoration.**



**It began
with a
leak...**



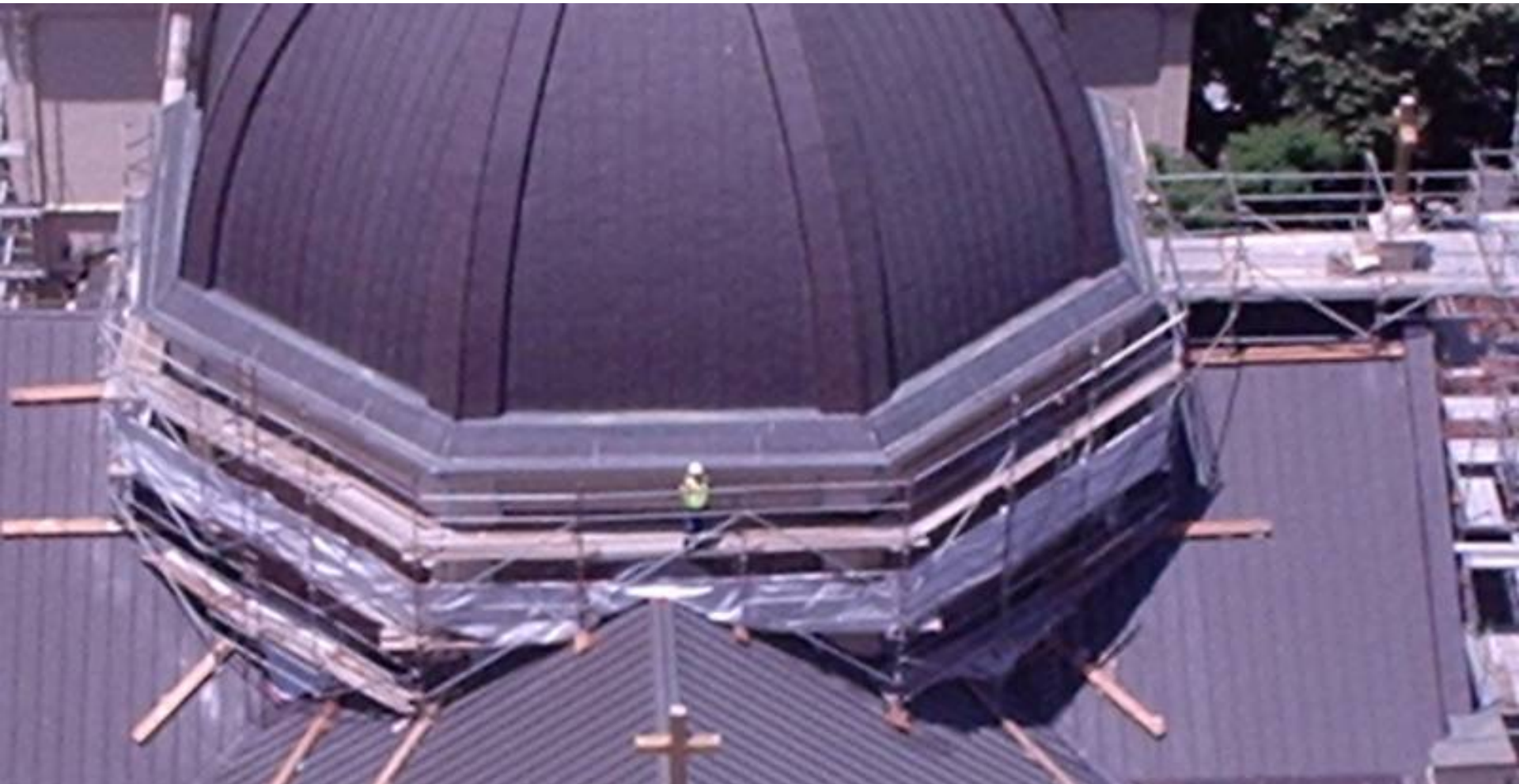


**Bishop William Weigand
commissioned an inventory of the
building by Harry Hallenbeck with
Vanir Construction.**



Harry Hallenbeck





But it soon evolved into a much larger project, a plan to restore the building's past. Preservationists were the driving force behind the project in an effort to restore the original design and style.




Beyer Blinder Belle were the Architects. This is the same company that restored both Ellis Island and Grand Central Station in New York.



John Belle

They started the restoration with a meticulous study of old photographs and archives to learn as much as possible about the original design of the building interior.



A photograph of a brick wall with a circular hole. The wall is made of red bricks with white mortar. The hole is located in the upper middle part of the wall. On the ground in front of the wall, there are several bricks and a small pile of debris. A metal rod or pipe is visible on the right side of the wall.

**For example, core samples
were taken to test the quality of
the brick.**



EverGreene Studios Of New York

then did a paint analysis of the walls to better understand the different colors and decorations of the first fifty years.



Jeff Greene

From these studies the restoration team created a restoration scheme to restore the church to its Victorian past.



**Harbison, Mahony, & Higgins
Construction of Sacramento together with
Vanir Construction Management, Inc.
(both local Sacramento companies) worked
as part of the team to restore the Cathedral.**



David Higgins





Flooding has always
been a problem.

Raising the level
of the streets was
part of the flood
management in
downtown
Sacramento.



This 1862 photo shows K Street, looking east from Fourth Street.





A 10 foot high underground waterproof membrane was built around the foundation of the building to protect the basement.





**A flood wall was constructed
on the north side.**

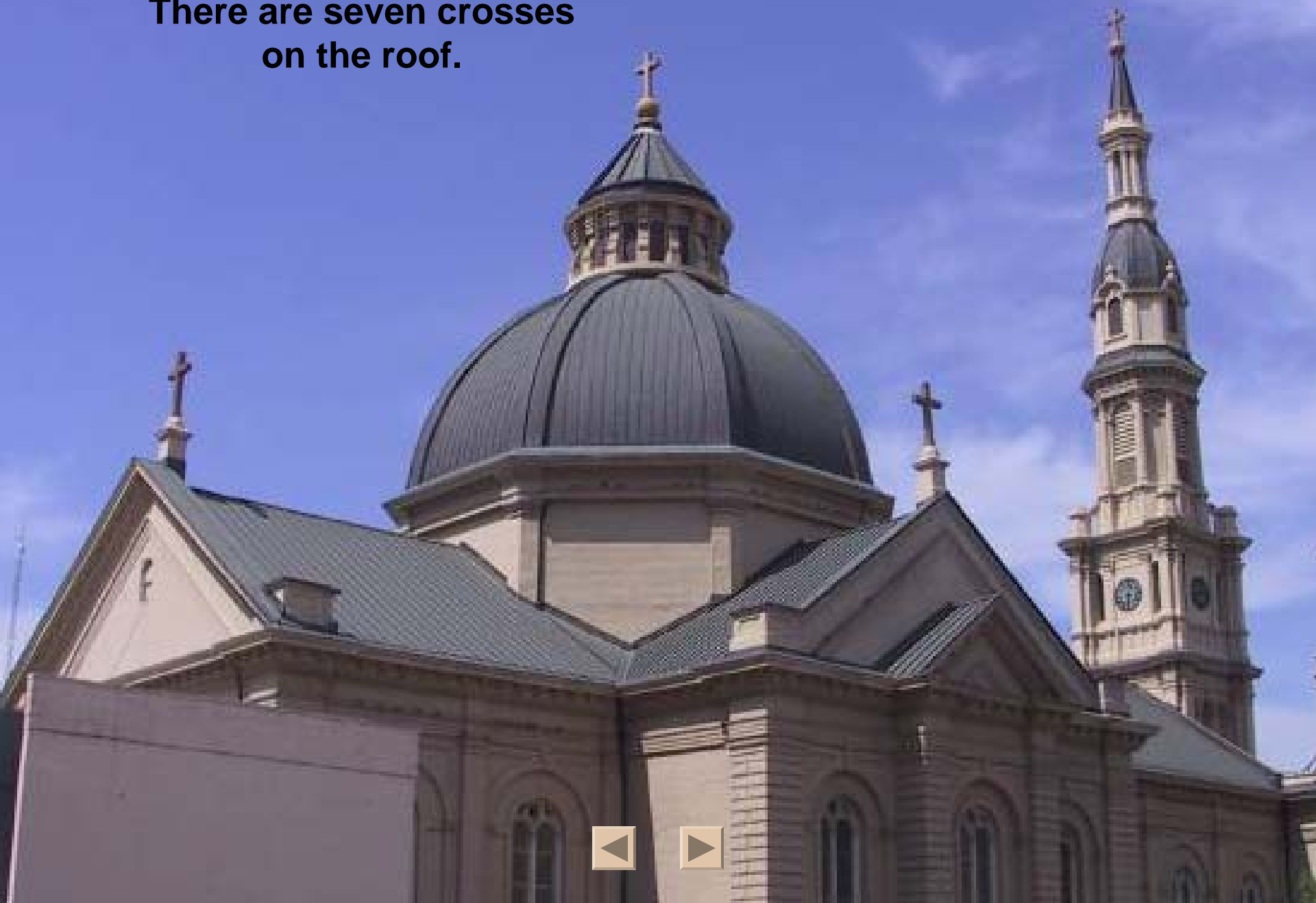


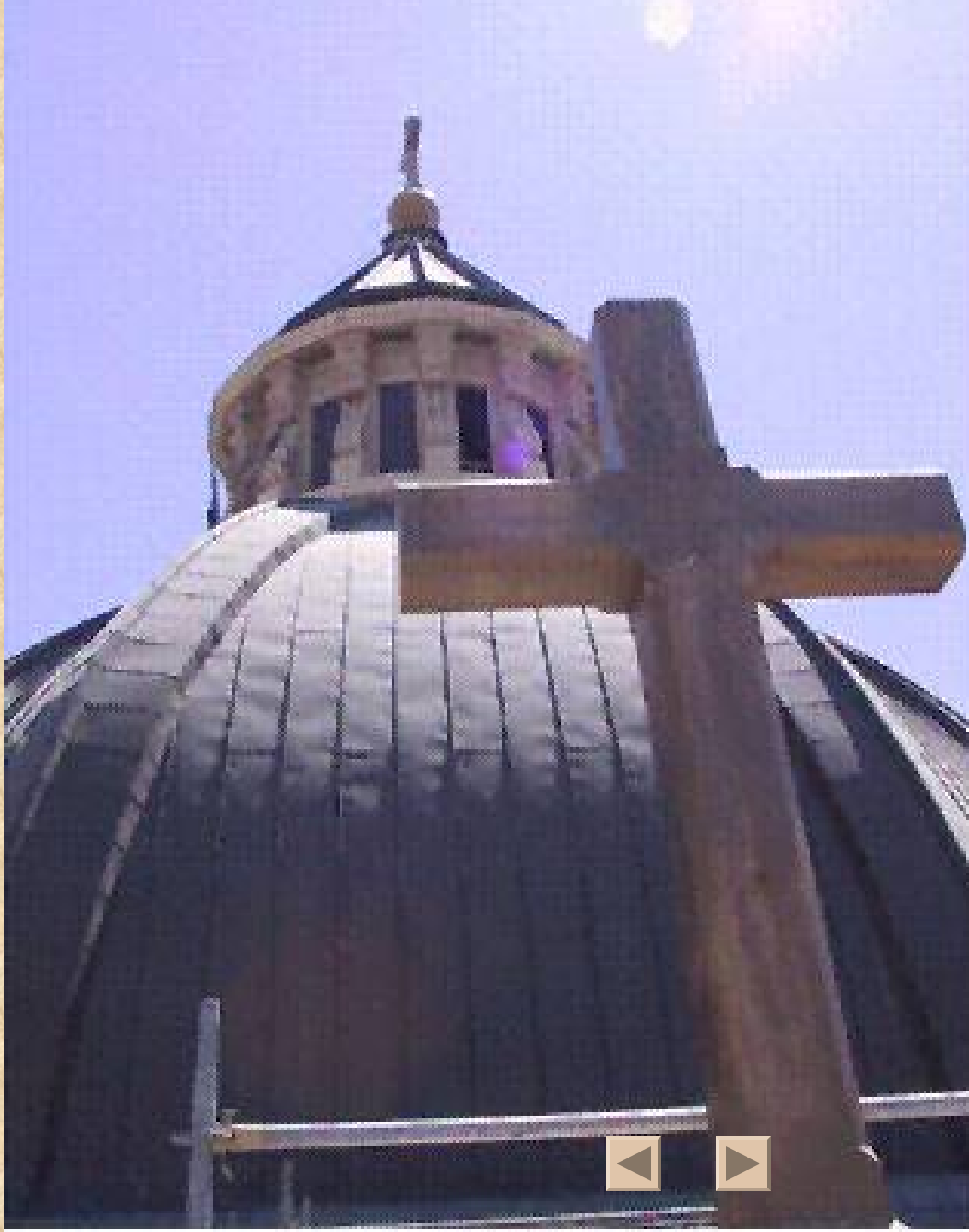
A photograph taken through a chain-link fence. In the background, there is a concrete structure consisting of a wall and a set of stairs. The stairs are made of concrete and lead up to a higher level. To the left of the stairs, there is a concrete wall. The ground in the foreground is dirt and gravel. The fence is made of metal links and is in the foreground, partially obscuring the view of the stairs and wall. The lighting is somewhat dim, suggesting it might be dusk or dawn. There are some electrical boxes or meters visible on the wall to the right.

These stairs are part of the flood wall on the north side.



**There are seven crosses
on the roof.**





The crosses
range from
six to eight
feet tall.



The central tower is 217 feet.



The side towers are 121 feet.



Steeplejacks from New York
did the gilding of the crosses.



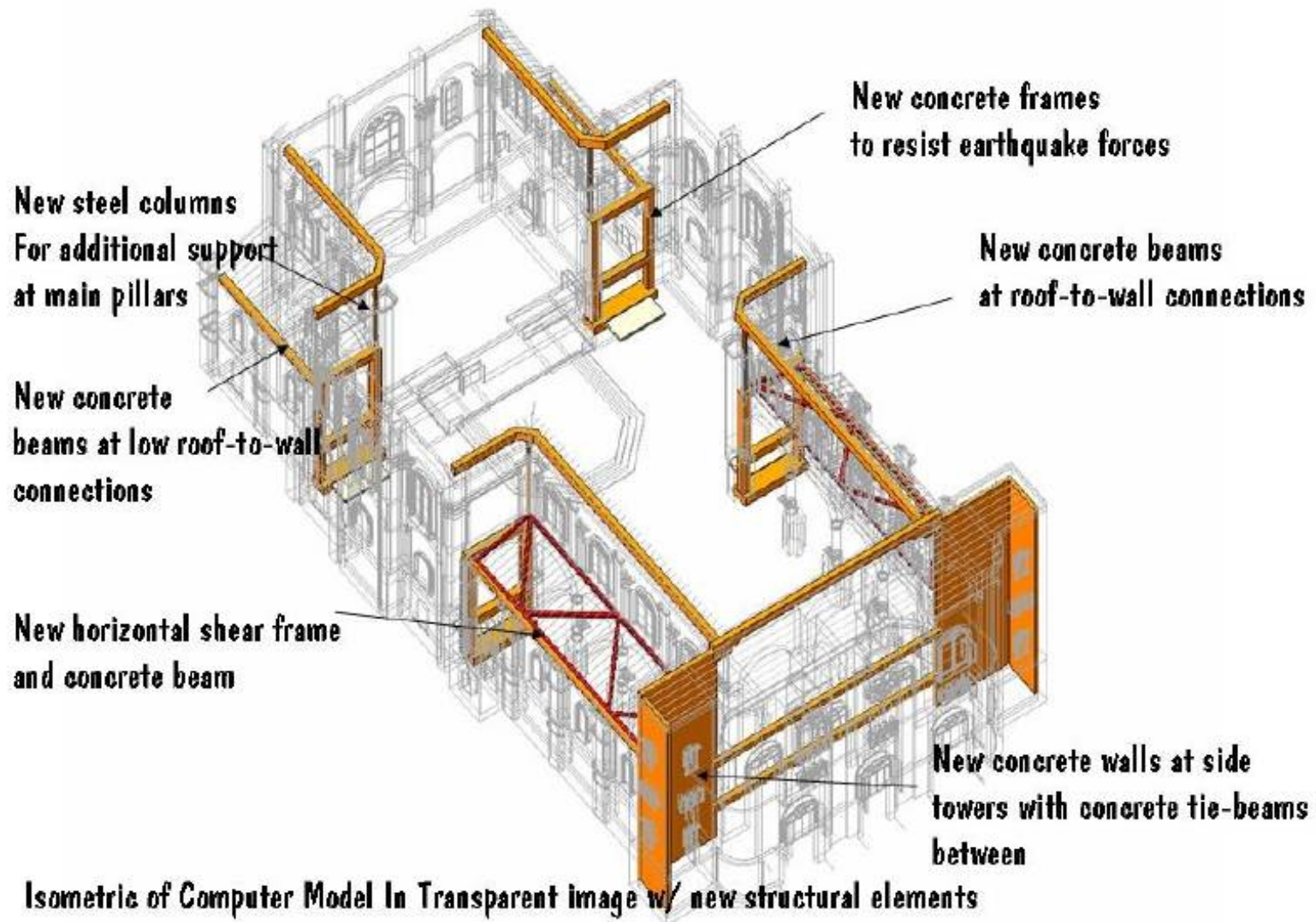
They hung from ropes some 216 feet above K Street.



Gold leaf was applied piece by piece.



Making the Cathedral earthquake safe was a major challenge for engineers.



Restoration of the Cathedral of the Blessed Sacrament

VANIR



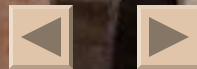
Engineers built a temporary structure inside the Cathedral that held up the dome while the pillars were being hollowed out and retrofitted.

The scaffolding in the Cathedral weighed 260 tons. Supports were put in the basement to prevent the floor from collapsing.





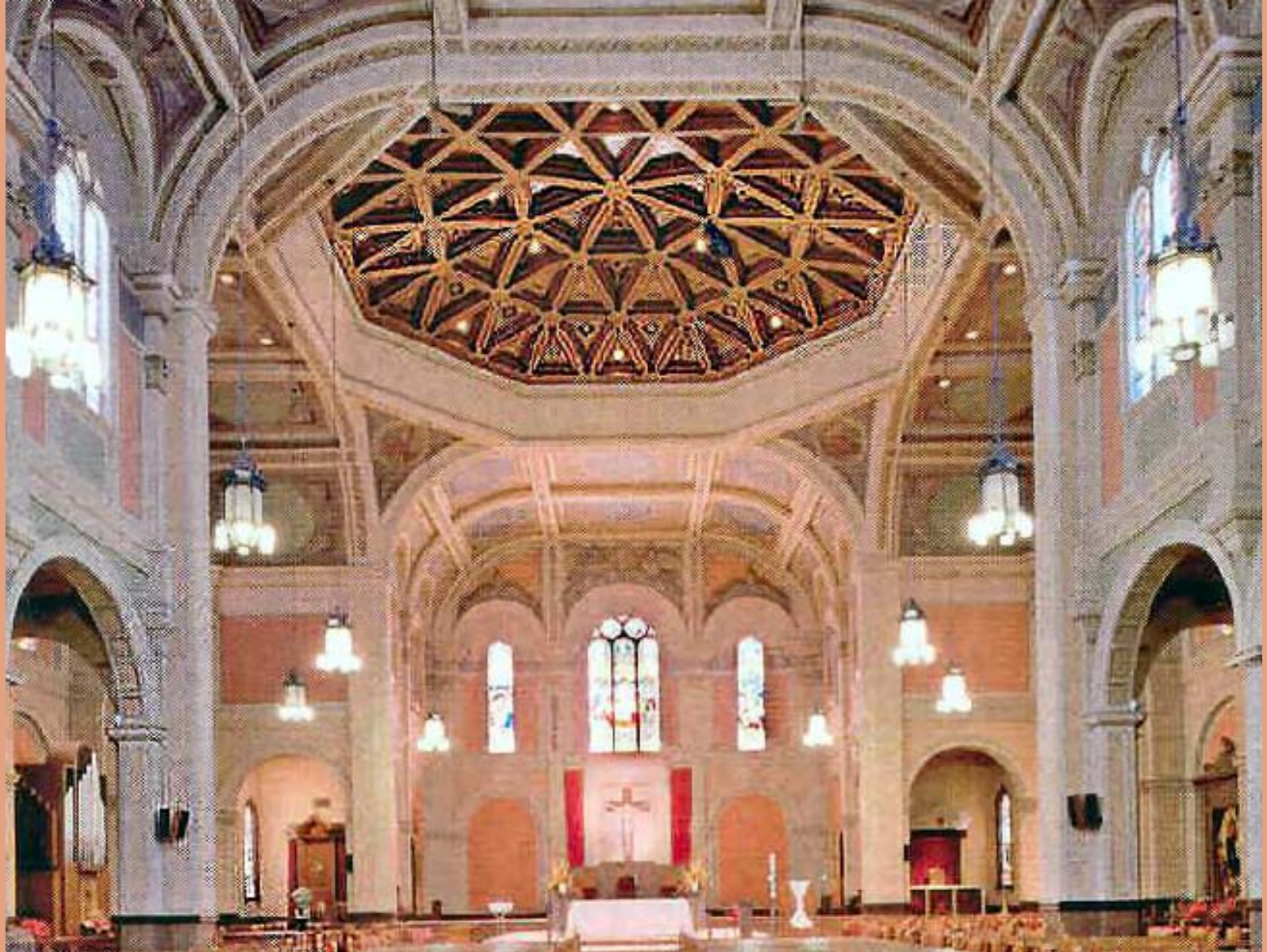
Each pillar was hollowed out and a pillar of steel was built inside.





320 tons of steel were used to retrofit the building.





Inside there was no stylistic unity.



In 1932 a false dome was constructed.



The good news was that the skeletal remains of the dome were still there and in excellent shape.

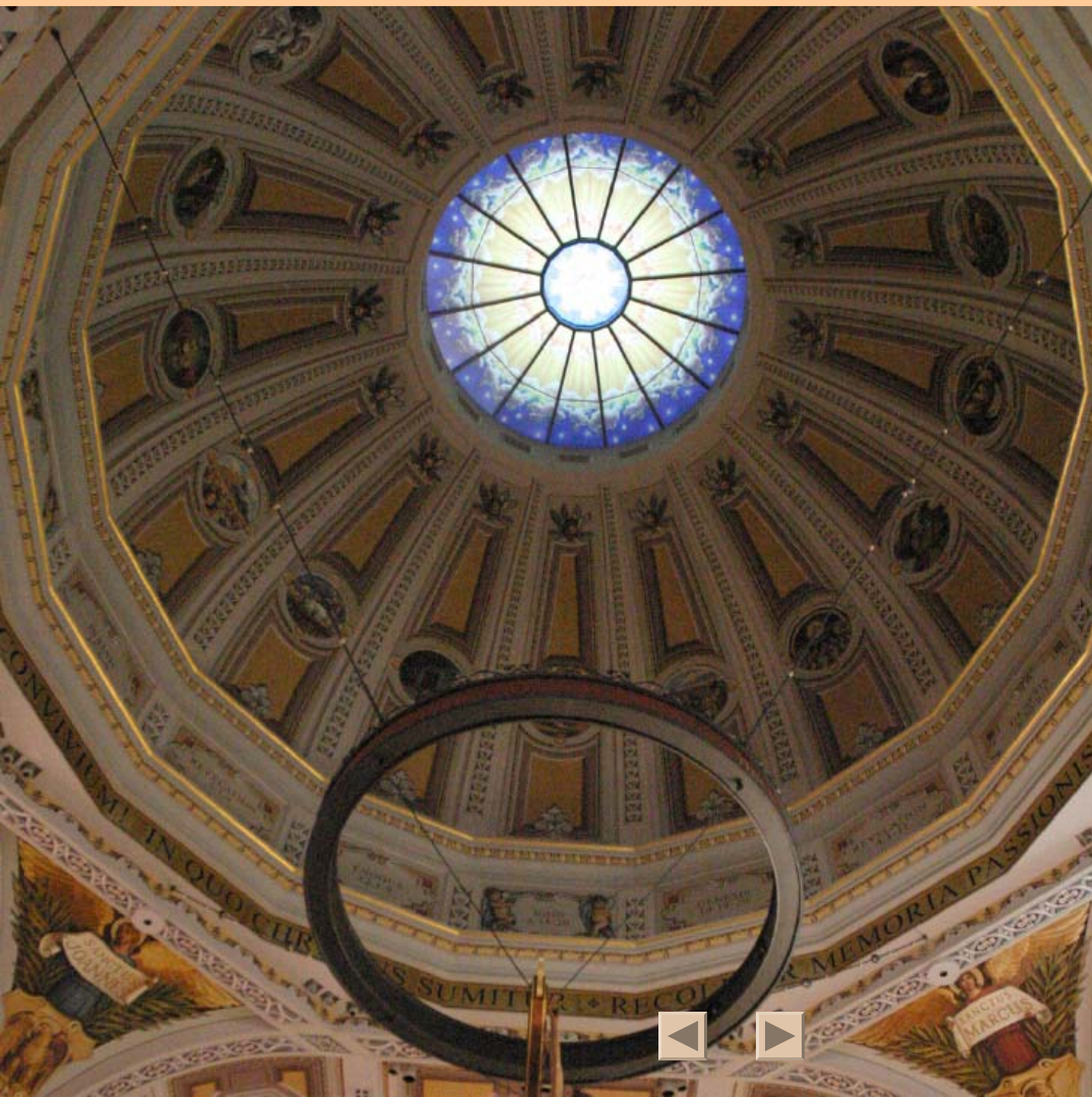




No photos of the original dome were found.

It was rebuilt using written descriptions and the scant records available.





**The oculus
at the top of
the dome is
24 feet in
diameter.**



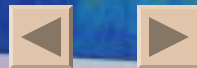


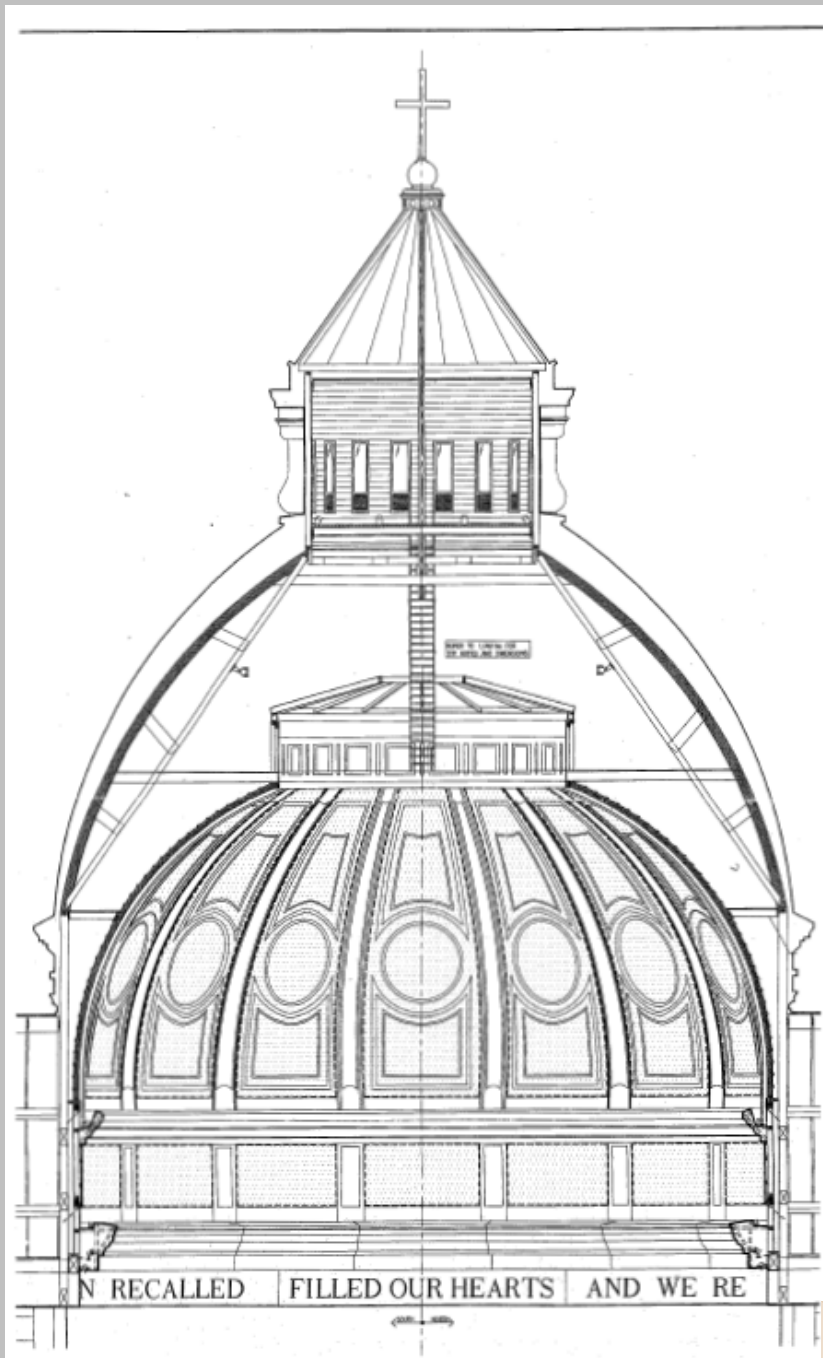
The image in the oculus, a digital photograph of a painting done by EverGreen Studios, gives the appearance of traditional stained glass.





The wingspan of the dove is 7 feet.





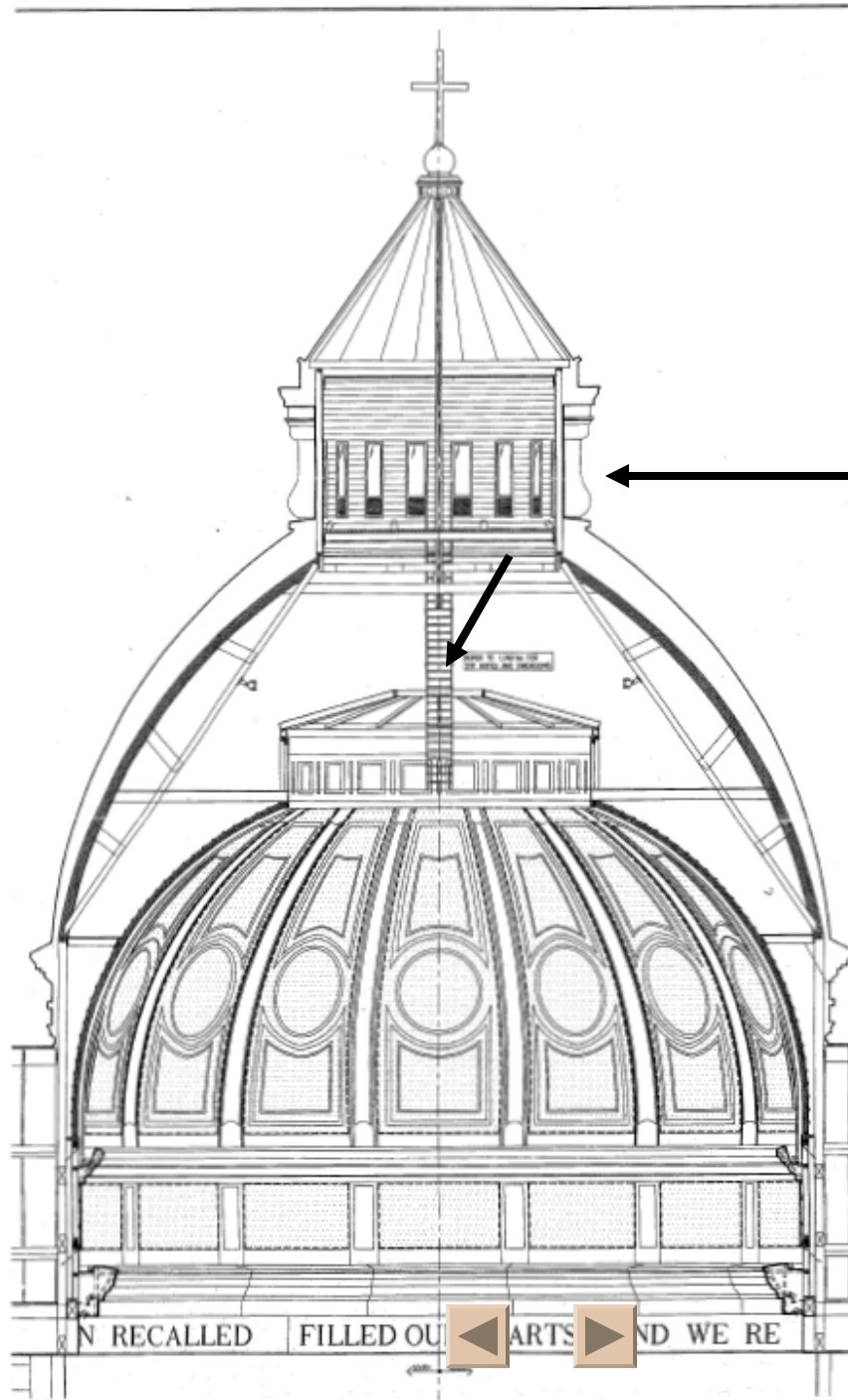
It is a dome inside a dome.




The oculus does not get direct sunlight.

The light touching the glass is reflected from the lantern at the top.





Light comes in here and is reflected down to the oculus.



The roundels are scenes from the New and Old Testament. The Scripture verse is below.

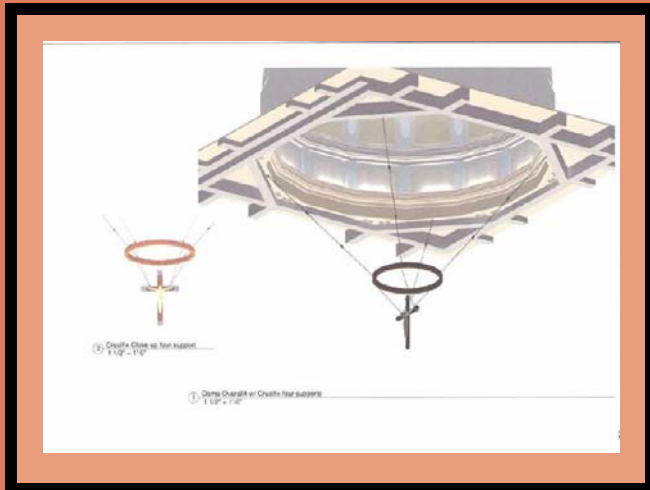
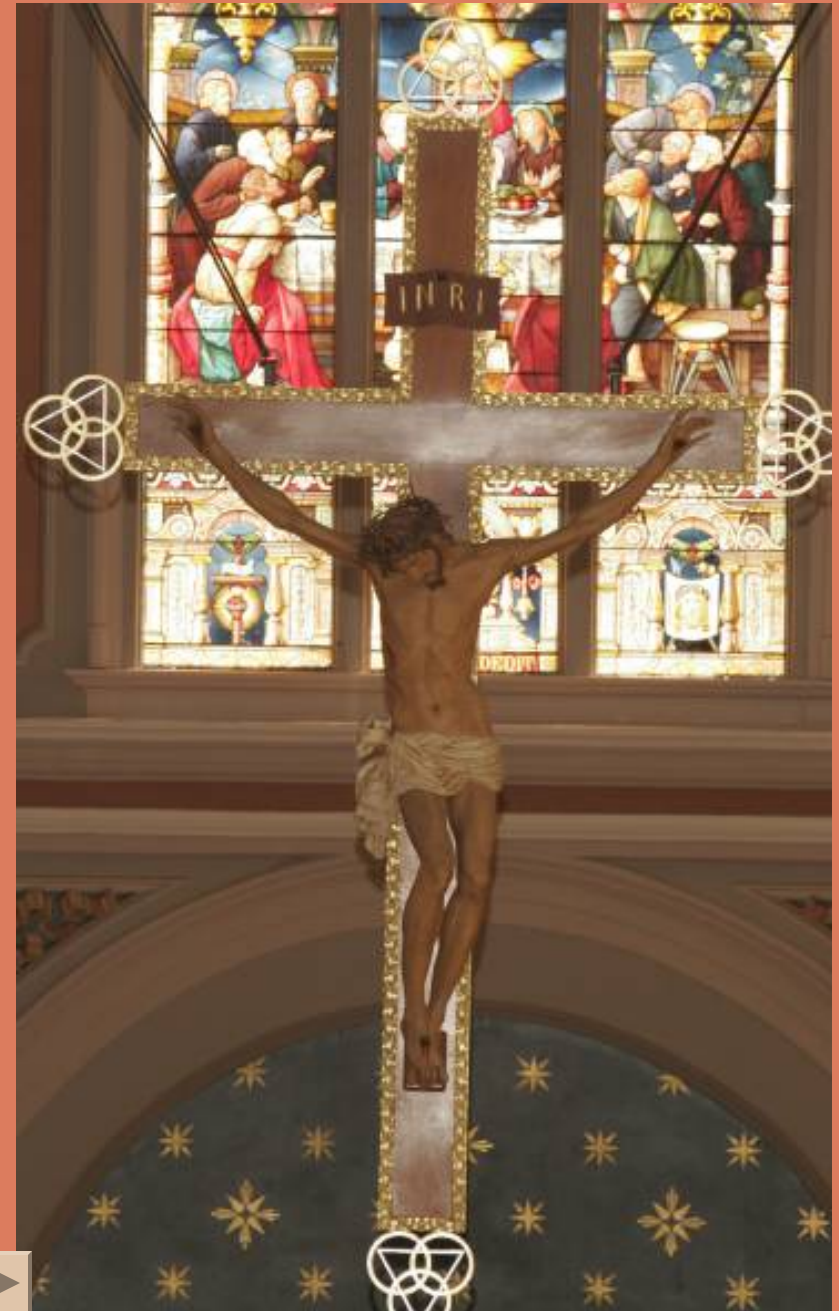


Each of the roundels are 5 feet in diameter.



Restoring the interior of the dome was one of the biggest changes in this project.





The crucifix over the altar is 13 feet high and the crown overhead is 14 feet in diameter.





Together the cross and the crown weigh almost 2,000 pounds, the weight of an elephant or a small car!

They are held in place with aircraft cables that could carry double that weight.





**250 original works of art
were painted by
EverGreene Studios on
canvas in New York and
sent to Sacramento.**

**Then the artists came to
the Cathedral to
complete the artwork and
do the finishing touches.**



Some of the painting was done by hand for example the gold “tipping”.



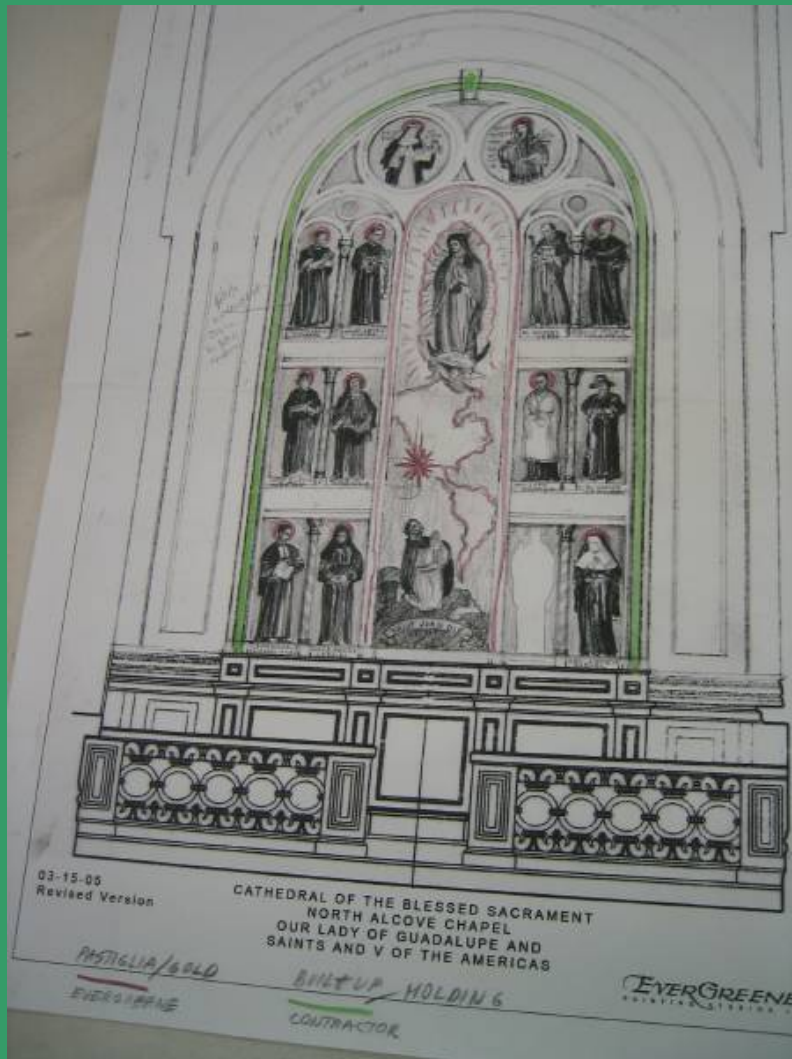
Some of the painting was done by hand to restore the original trompe d'oeil artwork.





And some of the painting
was done by hand with
stencils.





The north altar is a western interpretation of Byzantine art inspired by 13th century artist Giotto.



Giotto was famous for being the bridge between the Byzantine period and the more realistic Renaissance period of art.

The icons of the saints are very real in comparison to Byzantine icons.



The wood altars in
both of the side
chapels are from
1889.

EverGreen
Studios painted
them to look like
marble.





The inspiration for the mural on the south side is from a painting in the Vatican by Renaissance artist Pietro Perugino.



Each of the murals
are about 20 feet
high.





A non-traditional presentation of each evangelist, their names displayed by angels, are on each of the four pendentives above the altar. Matthew, Mark, Luke and John are referred to as the pillars of the church.





Pendentives



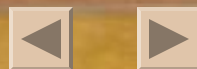


The baptismal font, altar and tabernacle are marble.





**The dark marble was mined in Spain
and sent to China.**



**The white
marble was
mined China.**

**All three
pieces were
fabricated in
China.**



The mosaic at the bottom of the baptismal font was done in New York. The tiles are marble with the exception of the dark blue tiles which are granite.



**“Like a deer that yearns for flowing water, so my soul is yearning
for you, my God”** Psalm 42



The tabernacle tower is 20 feet high and weighs 6 tons. A special platform had to be built to hold it up!



The tabernacle, which dates from 1937, was cleaned along with the sanctuary lamp.



The 100 year old sanctuary lamp hung before the high altar in the east end of the Cathedral in the early part of the 20th century.

During the restoration Monsignor Murphy received a call from a woman in El Dorado Hills who had the sanctuary lamp hanging in her house!

Nobody seems to know how it left the Cathedral, but we were happy to buy it back for \$5,000.





The relic of St. Toribio Romo was placed in the altar during the rededication of the building on November 20, 2005. It was surprising that there was no relic in the previous altar.



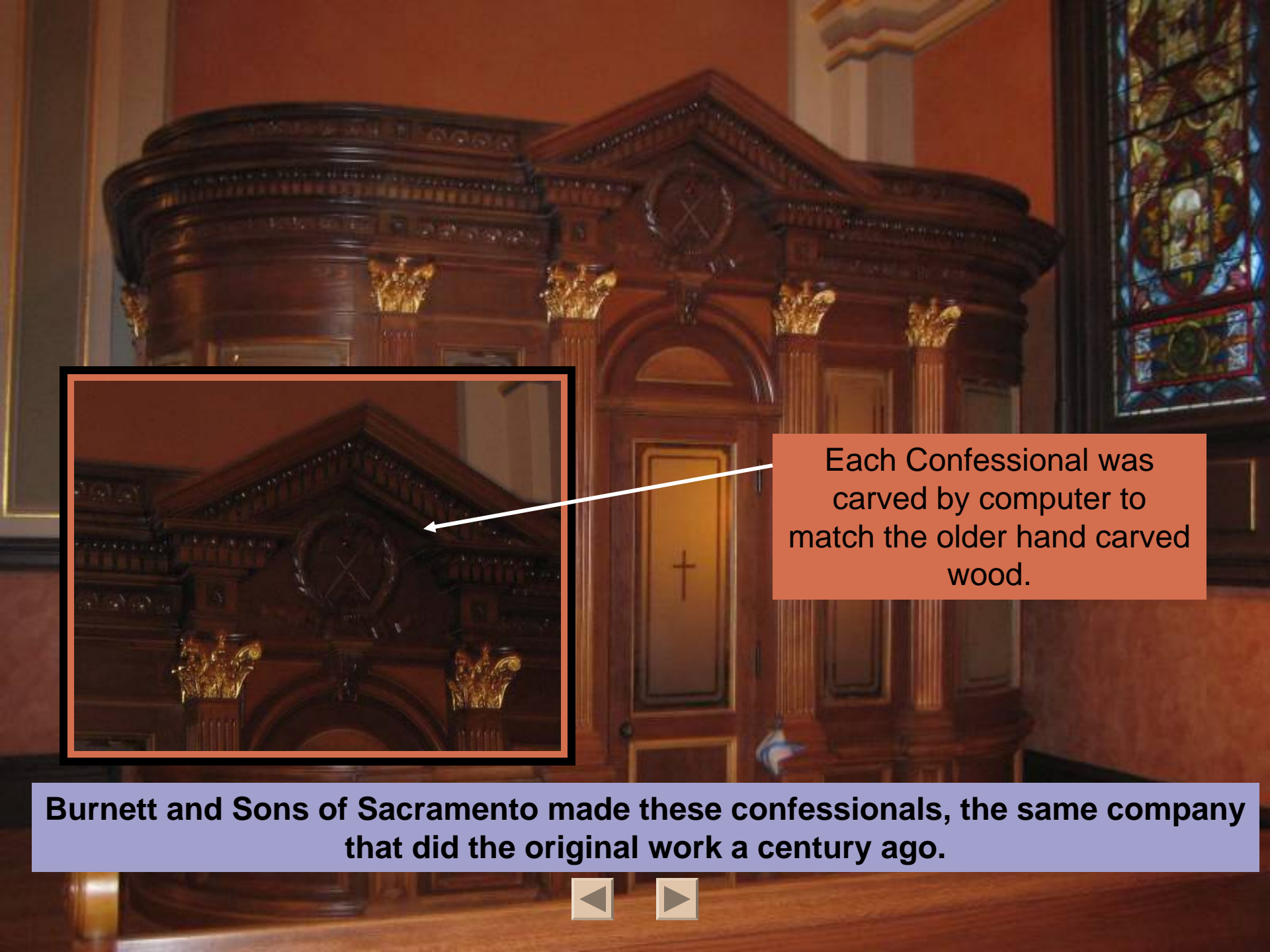


The Cathedral always had the Apostles on side walls. The roundels are new paintings of the Apostles.



With the exception of the modern windows in the nave, all the windows were cleaned and re-leaded.





Each Confessional was carved by computer to match the older hand carved wood.

Burnett and Sons of Sacramento made these confessionals, the same company that did the original work a century ago.





**The Cathedral was closed
over 2 ½ years.**

**During that time:
The United States was at war;**

**A Californian governor was
recalled and a new one elected;**

**A pope died and a new one was
elected;**

**US dioceses faced the biggest
crisis in the history of American
Catholicism;**

**The building boom in China
caused a world shortage of steel
and other building products.**

**The US Gulf Coast experienced
the worse natural disaster in 100
years.**