Massive Lego National Cathedral built with Vader, drones, Harry Potter wands



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- The inside of the Bethlehem Chapel replica, which is a small chapel in the basement of the cathedral. It is nearly complete except for the vaulted ceilings.
- What the chapel looks like in real life from the same vantage point
- The whole model, so far, seen from the front. The two front towers will rise from the front of the display.
- The front of the cathedral in real life, which the replica will one day resemble.
- Another view of the replica on its display table, with the Bethlehem Chapel seen in the back

- The view of the front of the cathedral from the inside.
- The view from the side of the cathedral
- A few of the side of the real cathedral.
- So far, just the foundation and support columns are built.
- The inside of the real cathedral
- Additional columns will be added, as well as floor panels (seen in hand)
- What the floors in the cathedral actually look like.
- Replica under constructions.
- A close up of the columns, which include 700 pieces each.
- The outer wall surrounding the Bethlehem Chapel.
- A module of the vaulted ceilings for the Chapel is placed.
- A close up of the build.
- An above view of the chapel.
- The tomb of Bishop Henry Yates Satterlee (the first Episcopal bishop of Washington and a key figure in the Cathedral’s construction)
- The foot of the tomb has stone angels, represented by Star Wars drone heads in the Lego replica
- Another view, where you can see the detail of each support column.
- On the Chapel’s exterior, you can take a look at the stained-glass windows.
- The back fo the cathedral in real life.
- The walls are being built up in layers.
- The strip of green along the foundation indicates the grass line.
- The replica already has a replica of the replica.
- A Lego carousel is added for fun. This picture was taken the week of the Cathedral’s annual flower mart festival, which includes a carousel.
- A few from the backside of the model.

WASHINGTON, DC—As millions of dollars in donations stacked up

for the Notre-Dame following the horrific fire last month, the Washington National Cathedral was quietly building its own restoration fund—brick-by-plastic brick.

Together with the Lego-building company Bright Bricks, officials at the cathedral have embarked on a project to build a massive replica of the cathedral out of Lego bricks. The project will raise money for much needed earthquake repairs. When complete, the towering yet detailed 1:40-scaled replica will be the largest Lego cathedral in the world. It'll contain an estimated 500,000 bricks, weighing 612 kilograms, measuring nearly 4-meters long, 2.5-meters wide, and rising 3.35-meters from its elevated platform. It may also be the largest Lego structure ever built from instructions—officials at the cathedral are in talks with Guinness World Records.

Those instructions—created by the designers and professional Lego aficionados at Bright Bricks—are used by volunteers and kind donors who buy individual bricks and place them on the growing replica by hand. The bricks go for $2 each and all the money goes toward the $19 million needed to repair damage from a 5.8-magnitude earthquake in 2011.

The quake caused extensive damage to the neo-gothic structure, with seismic waves rippling through to the top of the church's Indiana-limestone features. Stone pieces cracked, pinnacles rotated 20 centimeters on their bases, flying buttresses swayed and crumbled, a gargoyle was decapitated by a dislodged stone, and a 159-kilogram finial toppled, falling 20 stories to the ground—where it was later stolen. In all, there was $34 million worth of damage to the massive cathedral, the sixth largest in the world and second largest in the US (only Saint John the Divine in New York City is larger).

- Scaffolding shows the location of heavy damage from the earthquake.
- Scaffolding has been a prominent fixture on the

Cathedral since 2011.

- At the base, workers have lined up damaged and restored stone work.
- You can see pinnacles and stone carvings damaged.
- Informational signs explain the repairs.
- The left pinnacle of this side tower is missing
- The removed pinnacles had rotated on their base and were at risk of falling.
- The flying buttresses were also damaged
- Some stone carvings were able to be repaired, like the center piece here with a patch on the bottom right.
- New stone pieces have been bought from the same limestone quarry in Indiana

The Cathedral closed for weeks following the quake and engineers have worked to stabilize the structure, in some cases removing pinnacles and adding supports. In-house stone masons have worked tirelessly, patching, restoring, and replacing damaged stone pieces. The Cathedral has been blotched by scaffolding ever since. But, so far, the cathedral community has only been able to raise $15 million for the repairs in the years since the quake and much work remains.

That's where the Lego replica comes in, helping to raise additional funds and bringing in more visitors. Charles Fulcher, director of visitor programs got the idea during a visit to England a few years ago where he was inspired by the Durham Cathedral's own fundraising Lego replica project, (~300,000 bricks, also done with the help of Bright Bricks).

After years of laying the groundwork, the Lego project launched earlier this year—in true Lego fashion. Cathedral Dean The Very Rev. Randy Hollerith and Cathedral Provost The Rev. Canon Jan Naylor Cope blessed the bricks as boy choristers sang a rendition of "Everything is Awesome." In the months since, the cathedral has tallied well over 19,000 bricks on the growing replica. It's expected to take two or three years to complete—a timeline that's dwarfed by the 83

years it took to build the real thing, which spanned 1907 to 1990.

Ed Diment, Creative Director of Bright Bricks, tells Ars that in some ways, the National Cathedral—with it's much more recent and better planned construction—is a bit easier to replicate than other historic churches that Bright Bricks has modeled. "It's somewhat more regular," he says. "It's a little bit more symmetric and a little bit more even than most of the cathedrals in the UK, which tend to be built over several hundred years and people add on random bits all over the place or they change the architectural style halfway down the cathedral. What makes it more difficult, in some respects, is just the sheer size of the cathedral."

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