

THE SHELDON'S STEWARD FAMILY PLAZA BY THE NUMBERS/FUN FACTS

The Vertical Garden:

- Overall Dimensions: 34 feet, 4 inches x 208 feet, 4 inches
- The steel mesh frame is made from laser cut, ½ inch thick steel plates, tensioned to a double channel frame.
- Comprised of 1,858 segments, if you could break apart and line up each segment, they'd stretch 5,292 feet — just over a mile!
- 206 firefly lights are built into the mesh wall.
- The organic appearance of the mesh design is the product of a Catmull-Clark algorithm. The final design was enhanced by custom structural optimization algorithms coded for the mesh design.
- The mesh is a product of digital design and fabricated using digital laser cutting technology.
- The ½ inch thick steel mesh has an aspect ratio rivaling that of paper (length to thickness ratio of 5000:1), with approximately 90% of the steel plate removed by the laser cutting process.
- The comparatively “delicate” steel mesh is contrasted by aggregate tension forces that are massive, with up to 20-tons of force acting on the “outriggers” that support the mesh.
- The laser steel-cutting table used by Williams Patent Crusher is one of the largest in the United States, with a working width of 144 inches and an overall length of 100 feet.
- The laser uses 4,000 watts with a focus beam of .008 inches, reaching a temperature of 12,000 Kelvin.

Size and Weight of Mesh Wall:

Mesh (steel):	53,454 cubic inches or 30.9 cubic feet 15,523 pounds or 7.76 tons
Columns (steel):	80,253 cubic inches or 46.4 cubic feet 23,305 pounds or 11.65 tons
Frame (steel):	161,272 cubic inches or 93.3 cubic feet 46,833 pounds or 23.42 tons
TOTAL:	294,979 cubic inches or 170.6 cubic feet 85,662 pounds or 42.83 tons

- The rain gardens/green infrastructure will capture almost half a million gallons of stormwater a year.
- The final planting will have more than 5,000 shrubs and grasses native to Missouri, with an ornamental kempt design in the rain gardens and vibrant flowering vines on the vertical garden.

Sheldon Sign

- The Sheldon Sign is 10 feet, 8 ½ inches tall
- It is comprised of 510 layers of ¼ inch stainless steel.
- A total of 3,111 feet of waterjet profile cuts were made to create the sign.

Groundscape

Concrete Paving: Approximately 9,000 square feet, project-wide

Landscape Area: Approximately 8,000 square feet, project-wide