



THE STRONG MUSEUM OF PLAY PARKING STRUCTURE, ROCHESTER, NY

PARKING STRUCTURE COST OUTLOOK FOR 2020

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WGI has specialized in parking structure planning and design since 1983, and our annual parking structure construction cost report provides an important planning tool for owners, contractors, and design teams.

WGI maintains a database of completed parking structure projects and developed a methodology to analyze the historical cost information to assist our clients and the industry. Our construction cost database contains hundreds of completed parking structure projects of varying size, scope, and geographic location. For this forecast, we only omit the cost of parking structures that are completely or significantly below grade, since their cost is much higher. The cost data is assigned factors based on the time of bidding and location of the parking structure. The time factor is based on the Building Cost Index (BCI), published by *Engineering News-Record (ENR)*. The location factor is taken from the yearly edition of the *RS Means Building Construction Cost Data*. Applying these two factors to actual construction cost data adjusts the cost to a current national basis and from that we determine the national median. The national median can then be re-adjusted to reflect a median construction cost in almost every city in America.

As of May 25, 2020, our statistical data indicates that the **median** construction cost for a new parking structure is **\$22,200 per space, or \$66.34 per square foot**; a 3.3% increase from 2019 when the median cost was \$21,500 per space. The table below lists the 2020 **median** parking structure construction costs in various U.S. cities with

the lowest cost shared by Charlotte, Dallas, and Miami, the highest in New York, and Kansas City, MO at the national median of 100.0.

It should be noted that the construction cost data **does not include costs** for items such as land acquisition, architectural and engineering fees, environmental evaluations, materials testing, special inspections, geotechnical borings and recommendations, financing, owner administrative and legal, or other project soft costs. Soft costs are typically about 15% to 20% of construction costs, but can be higher for owners who allocate their internal costs directly to the project.



Four-level parking structure constructed entirely of precast concrete with integrally colored precast and face brick.



FOR COMPARISON, A MEDIAN-COST PARKING STRUCTURE TODAY TYPICALLY INCLUDES:

- 8'-6" to 8'-9" wide parking spaces
- Precast concrete superstructure
- Precast concrete façade with a basic reveal pattern
- Glass-backed elevators and unenclosed stairs clad with exterior glass curtain wall
- Standard wayfinding and signage
- Shallow-spread footing foundations
- All above-grade construction
- Open parking structure with natural ventilation; without mechanical ventilation or fire sprinklers
- Minimal or no grade-level commercial space
- Standard parking access and revenue-control system
- Standard energy efficient LED lighting

TODAY'S PARKING STRUCTURE CONSTRUCTION COST WOULD BE HIGHER THAN THE MEDIAN IF IT INCLUDES THESE ENHANCED FEATURES:

- 9'-0" wide parking spaces for improved user comfort
- Cast-in-place post-tensioned concrete superstructure for lower maintenance costs
- Attractive façade with adorned precast, brick, metal panels, and other materials
- Storm-water management including on-site retention / detention
- Deep foundations such as caissons or piling
- Below-grade construction
- Enclosed stair towers due to local code requirements
- Enclosed parking structure without natural ventilation where mechanical ventilation and fire sprinklers are required
- Flexibility for future parking / building expansion, or incorporation of roof-level solar panels
- Service life in northern / coastal regions beyond a standard 50 to 60 years
- Grade-level commercial space
- Mixed-use development where the parking is integrated with office, retail, residential, or other uses
- Custom wayfinding and signage system
- ParkSmart® Certification following the Green Business Certification, Inc. (GBCI) program



- Energy efficient LED lighting with occupancy and photocell computer-control system
- Enhanced parking technology
 - License plate recognition
 - Parking-guidance system
 - Car-count system with variable-message LED signs
 - WiFi and cellular services
 - Solar-energy collection
 - Building Management System



Building Management Systems are often used to help manage technology



384-space parking structure with brick and stone façade that complements the main building on the medical campus. The project is part of a multi-year, multi-phase expansion which includes a five-story medical office. Additional surgical areas will also be developed with the main hospital to better serve patients.

City	Index	Cost/Space	Cost/SF
Atlanta	88.0	\$19,536	\$58.38
Baltimore	94.0	\$20,868	\$62.36
Boston	116.0	\$25,752	\$76.95
Charlotte – Lowest	85.0	\$18,870	\$56.39
Chicago	119.0	\$26,418	\$78.94
Cleveland	96.0	\$21,312	\$63.68
Denver	91.0	\$20,202	\$60.37
Dallas – Lowest	85.0	\$18,870	\$56.39
Detroit	101.0	\$22,422	\$67.00
Houston	87.0	\$19,314	\$57.71
Indianapolis	92.0	\$20,424	\$61.03
Kansas City, MO – Median	100.0	\$22,200	\$66.34
Los Angeles	112.0	\$24,864	\$74.30
Miami – Lowest	85.0	\$18,870	\$56.39
Minneapolis	106.0	\$23,532	\$70.32
Nashville	87.0	\$19,314	\$57.71
New York – Highest	132.0	\$29,304	\$87.57
Philadelphia	117.0	\$25,974	\$77.61
Phoenix	89.0	\$19,758	\$59.04
Pittsburgh	102.0	\$22,644	\$67.66
Portland	102.0	\$22,644	\$67.66
Richmond	88.0	\$19,536	\$58.38
St. Louis	101.0	\$22,422	\$67.00
San Diego	109.0	\$24,198	\$72.31
San Francisco	129.0	\$28,638	\$85.58
Seattle	109.0	\$24,198	\$72.31
Washington, D.C.	95.0	\$21,090	\$63.02
National Median	100	\$22,200	\$66.34

2020 CONSTRUCTION COST ▲ 3.3% FROM 2019

PARKING INDUSTRY 2020 CONSTRUCTION ECONOMIC FORECAST

FIRST QUARTER (PRE-PANDEMIC)

Heading into 2020 and prior to the Coronavirus (COVID) pandemic, the key concerns were still labor shortages in construction trades, tariffs, and trade relationships. The construction market showed signs of slowing down, but growth was expected to continue into 2020. Likewise, construction of mixed-use and stand-alone parking structures was to remain steady. Prior to the COVID pandemic industry experts reported the following regarding construction activity:

- The *American Institute of Architects (AIA)* chief economist Kermit Baker, PhD stated that, "design activity at architecture firms, historically a very accurate leading indicator of future construction activity, showed unexpected weakness earlier in 2019. However, design billings improved during the fourth quarter, and new projects coming into architecture firms saw strong growth toward the end of the year. So, while 2020 and 2021 are expected to see only very modest gains in construction spending nationally, the prospects of a more significant downturn over this period have dimmed recently." The article also reported that, "The American Institute of Architect's Consensus Construction Forecast Panel is projecting just a 1.5% increase in spending on nonresidential buildings this year and less than 1% increase in 2021, according to recently released results."¹
- *Turner Construction's Turner Building Cost Index*, which tracks construction costs, indicated 1.29% increase in the fourth quarter of 2019 and a 4.84% increase during 2019. Its 2019 Fourth Quarter Forecast states that, "We continue to see the construction market fairly busy with several large projects starting in the fourth quarter of 2019."²



Eight-level, 400-space CIP PT parking structure. The development includes street-level retail, a nine-story residential building, and a 10-story office building.

- *ENR* reported in its 2019 Fourth Quarter Cost Report a forecasted 1.6% increase in the Building Cost Index for 2020.³
- *ENR* reported in its 2020 First Quarter Cost Report that, "The concern about the emergence of COVID-19, as the disease caused by the virus is known, has had surprisingly little impact on industry executives' views of the construction market in the near term, at least as seen in the latest results of ENR's latest Construction Industry Confidence Index (CICI) survey. It rose four points to 56 in the first quarter of 2020 from the fourth quarter of 2019 – an especially surprising result given that 44% of the surveys came in after the media began heavy coverage of the health crisis."⁴

SECOND QUARTER (PANDEMIC)

During the pandemic shutdown, the AIA Architecture Billings Index (ABI) score plummeted to 29.5 in April, a new all-time low. Any number below 50 indicates a decrease in billing. The ABI serves as a leading economic indicator that leads non-residential construction activity by approximately 9-12 months. The northeast region was hit the hardest followed by the south region. Firms in the west region reported somewhat less dramatic losses than the other regions in April, but overall, all the regions had significant declines in billings.⁵ This decrease in billings resulted in approximately 11,000 positions, or approximately 5.5%, lost in architectural firms in April. The construction industry also lost 995,000 jobs in April, 13% of the workforce.

The AIA published an April 6 update to its 2020 projections for the non-residential construction industry. The article stated, "The American Institute of Architect's Consensus Construction forecast panel is now projecting an 11% decline, with the sharpest decline predicted to occur in the commercial construction sector. While a slight 0.6% growth was originally forecast for 2020, it has now been revised down to a loss of 14%. Institutional construction spending will also be hard hit, although not quite as seriously as commercial with losses of 7% now projected versus 2.9% growth predicted in December."⁶

An article published by *For Construction Pros* on April 10, 2020, noted, "Dodge forecasts the square footage of parking garage starts this year falling 29%, office starts dropping 13%, retail space down 33%, and hotels and motels down 31%. The biggest commercial building sector — warehouses — however, is only expected to slip 1%."⁷

As the world tries to recover from this global pandemic and the economy here in the United States starts to open up, there remains uncertainty in the design and construction industry. AIA Chief Economist Kermit Baker, PhD noted, "A large portion of the design and construction industry remains mired in steep cutbacks as many businesses and organizations are still trying to figure out what actions make sense in this uncertain economic environment." He went on to add, "There are growing signs of activity beginning to pick up in some areas, but others are seeing a pause as pandemic concerns continue to grow."⁸

However, there are some positive signs out there. The housing sector seems to be quickly recovering. The AIA Architecture Billings Index (ABI), which plummeted to 29.5 in April, rose to 32.0 in May. Construction employment in May increased by 464,000 jobs.



SUMMARY

What does all this mean for the construction of new parking structures and the median construction cost for these facilities in 2020? Before the COVID pandemic hit, the *American Institute of Architect's Consensus Construction Forecast Panel* was projecting just a 1.5% increase in spending on non-residential buildings and the *Engineering News-Record* forecasts a 1.6% increase in the Building Cost Index. As the economy starts to reopen, there is just too much ambiguity and not enough data yet to fully understand the complete impacts of the pandemic, but early indications point to a significant decline in the institutional (14% loss) and commercial (7% loss) sectors that traditionally build parking structures. With the potential reduction in material costs, the reduced labor shortages, and increased competition, parking structure costs in 2020 may actually decrease in some regions.

The parking professionals at **WGI** are happy to assist with the budgeting of your next parking structure. If you have any questions or would like specific cost information for your area, contact Raymond Smith at Raymond.Smith@WGInc.com or call us at 800.FYI.PARK (800.394.7275).

WGI is an ENR Top 500 engineering and consulting firm specializing in Land Development and Municipal Engineering, Traffic and Transportation Engineering, Parking Solutions, Geospatial Services, Subsurface Utility Engineering, Structural Engineering, Landscape Architecture, Environmental Sciences, Architecture, Land Planning, MEP Engineering, New Mobility Services, and Water Resources. The WGI Parking Solutions group specializes in parking structure design; structural engineering; parking studies; parking operations consulting; and restoration of parking structures, plazas, facades, and other buildings just as Carl Walker did for 33 years.

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