

Commercial Construction Market Trends: 2018 and Beyond

Presented By:
Building Design+Construction Editorial Team

2017 CIIM* Construction Spending Total



MULTIFAMILY



HEALTHCARE



OFFICE



RETAIL



INDUSTRIAL



EDUCATION



HOTEL



U.S. Census Bureau; Multifamily: Apartment List * CIIM = commercial, institutional, industrial, multifamily ** Total also includes construction spending for Public Safety, Amusement, and Religious buildings

2018 FORECAST : CIIM* Construction Spending



MULTIFAMILY



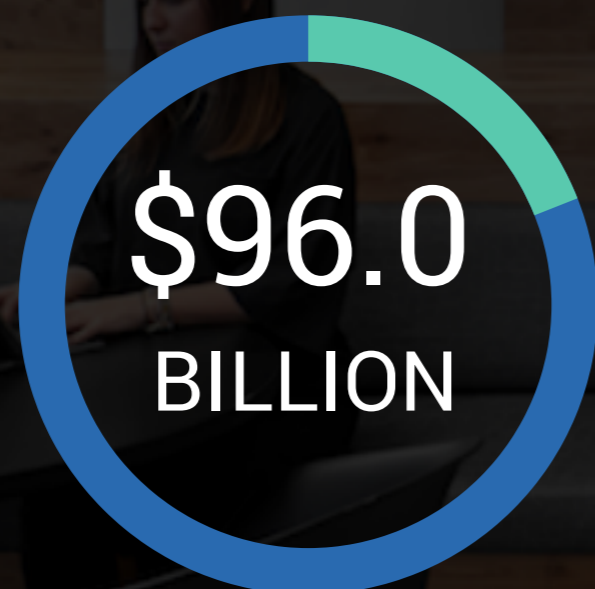
HEALTHCARE



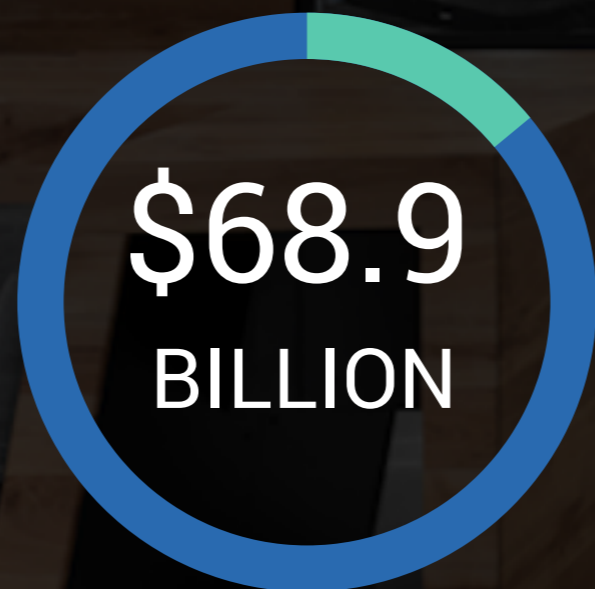
OFFICE



RETAIL



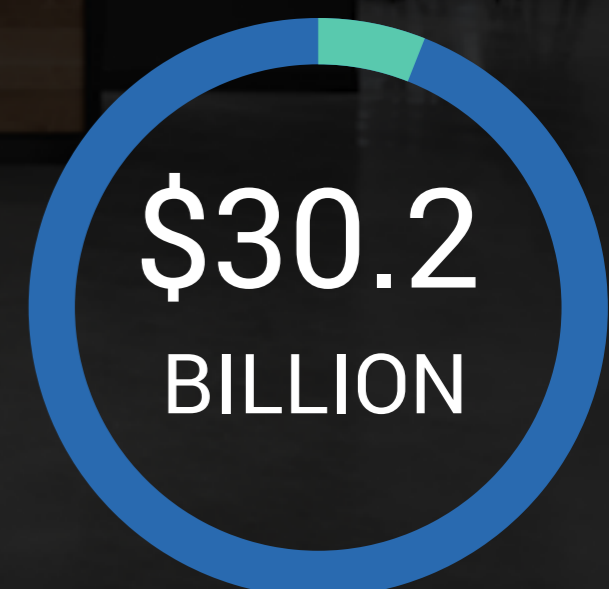
INDUSTRIAL



EDUCATION



HOTEL



Trends By Sector

MULTIFAMILY

- 18% of residential market
- Amenities arms race
- Urban + suburban cores are hot
- Renos/conversions (churches, industrial)
- Boom: Seattle, Denver, Dallas, Portland

OFFICE

- Authenticity
- Sense of place
- Connection
- Co-working
- Amenities arms race

EDUCATION

UNIVERSITY

- Budget shortfalls
- Spending focus: housing, S+T
- Career prep/entrepreneurship is a strong focus

K-12 SCHOOLS

- Maker/innovation spaces
- “Smart flexible”
- Tech enabled

RETAIL

- Brick & Mortar: 90%
- Demand in pockets
- Big boxes go small
- Amazon Go effect
- Appear Here: Airbnb for retail

INDUSTRIAL

- Automation
- Distribution centers closer to city centers
- “The last mile”
- Vertical industrial?

HEALTHCARE

- Obamacare/reimbursement
- Outcomes-driven
- Rise of telemedicine
- Outpatient rules
- Consolidation persists

HOTEL

- Dual, co-branded
- Local flavor
- Co-working flare
- Airbnb effect

#1

OFFSITE CONSTRUCTION IS HERE TO STAY

- Owners requiring prefab/modular
- GCs building modular/prefab factories
- "Design for manufacturing" set to take hold
- FMI study: 74% GCs use prefab on select projects
- Subs are getting more sophisticated
- Starting to see \$\$ gains, on top of schedule/labor benefits
- "Jobsite as a factory": delivery, sequencing, coordination, progress tracking

#2

SILICON VALLEY IS EYING AEC

- Beyond traditional real estate players like Autodesk, Caterpillar
- Billions in VC money entering the market
- SoftBank: \$865 million to Katerra
- Report: More than 20 VC funds, strategic funds, accelerators targeting AEC
- Investing in: software, hardware, construction cos., building products

#3

AI HAS ARRIVED

- First generation of AI tools (ALICE, Pype, Smartvid.io)
- WeWork, Mortenson, McCarthy, Skanska among early adopters
- McKinsey report: AI use cases across the entire project lifecycle
- Top AI applications:
 - Project schedule optimizers
 - Image recognition and classification
 - Enhanced analytics platforms to collect and analyze data from sensors

#4

DATA FUELS INNOVATION – AND IT'S IN SHORT SUPPLY

- Feeds everything from AI to BIM/VDC
- Siloed nature of AEC
- Timeliness of data
- “Fuzzy” data
- Who controls and owns the data?
- Innovations: sensor technology, IoT, reality capture, UAVs

#5

THE OUTDOORS IS IN

- Biophilia boom: Huge investments “nature” across many building types
- Healing gardens, living walls, rooftop terraces, therapy gardens
- King’s College London study: Nature has a lasting positive effect on the mind
- Upkeep/maintenance is an issue for owners

#6

AMENITIES ARMS RACE HEATS UP

- THEN: Speculative office buildings, multifamily, hotels, higher education
- NOW: Corporate office, tech, S+T, university athletics
- Health/wellness and “sense of place” top amenities
- Others: bike storage/lockers, dog park, dog washing station, entertainment spaces, wifi speed, package center

#7

FIRMS ARE SCRAMBLING TO KEEP PACE WITH TECH

- Top firms have R&D teams + processes
- Innovation competitions, maker culture
- Mid/small firms may get left behind
- Data analytics/research supplementing experience/intuition
- AR, VR, drones, rovers, laser scanning, sensors, RFID, IoT, AI, BIM/VDC tools
- Can tech transform this low-margin business?

#8

SMART BUILDINGS ARE THE NEW "GREEN"

- Prediction: Within the next seven years, the U.S. market will have a “smart certified” designation
- Why? Smart buildings are highly marketable, owner friendly, productivity focused, and resource efficient
- Advanced integration and automation: HVAC, lighting, electrical, security
- Developer of the world's smartest building (The Edge) targeting the U.S. market

#9

LABOR/TALENT SHORTAGE PERSISTS

- Firms turning down work
- Lesson from Great Recession: don't scale too aggressively
- Firms looking outside the industry: gaming, tech, BIM
- Firms bringing "craft workers" in-house
- Using tech + processes to more effectively evaluate prospective projects
- Labor shortage is a huge issue at the subcontractor level

QUESTIONS?

David Barista
Editorial Director
dbarista@sgcmail.com

John Caulfield
Senior Editor
jcaulfield@sgcmail.com

Robert Cassidy
Executive Editor
rcassidy@sgcmail.com

David Malone
Associate Editor
dmalone@sgcmail.com