

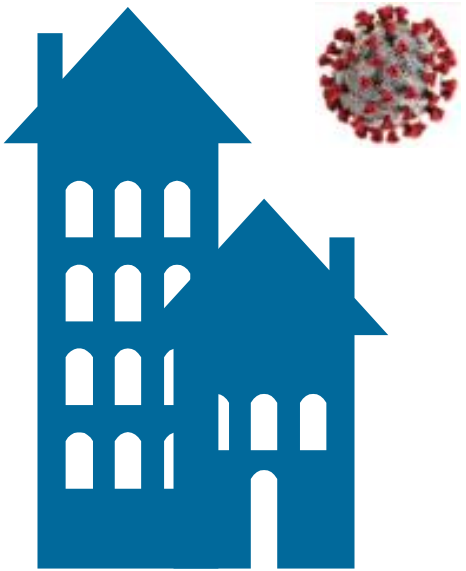
November 2020

DUCKER

RESEARCH & CONSULTING

**2020 US CONSTRUCTION INDUSTRY
ANALYSIS DURING COVID**

Updated Analysis and Outlook for 2021



Ducker is a leading global market intelligence and consulting firm with 60 years of experience in the construction industry and a long-standing partner of USG

60 years
200+ professionals
9 offices
1 goal *to support our clients' growth mandates in their most important markets*



Deep Industry Expertise

Dedicated sector practices for:

- Automotive & Transportation
- Building & Construction
- Consumer Products
- Healthcare
- Heavy Equipment
- Industrial
- Private Equity
- Technology

Global Capabilities

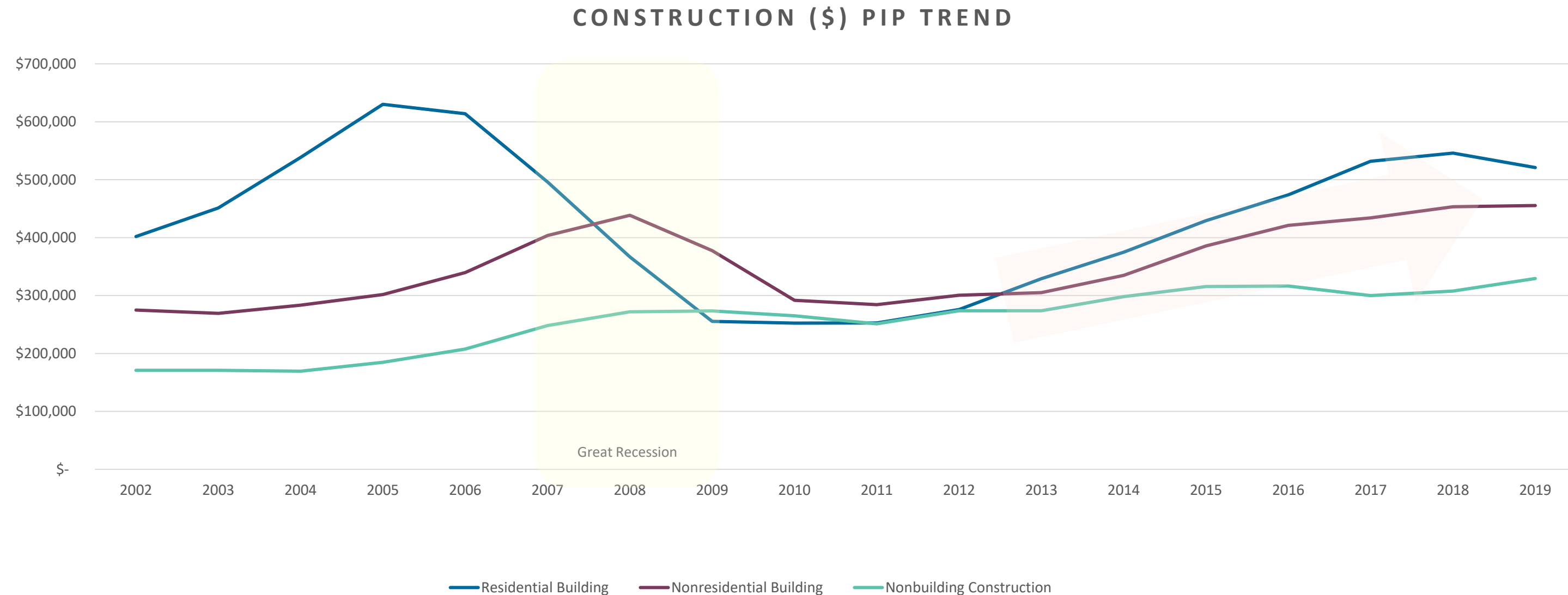
Dedicated research practices for 80+ markets across:

- Asia Pacific
- Latin America
- Europe
- Middle East & North Africa
- Sub-Saharan Africa
- North America

Proven Research and Consulting Services

Separate signal from noise to understand opportunities and market risks through:

- Deep construction expertise and renowned access to decision makers
- Valuable proprietary data and forecasts
- Custom research and analytics
- Innovative research tools, methods across quantitative, qualitative and digital



- Residential construction spending experienced significant decline in past recession due to unqualified lending and less healthy consumers
- Residential was demonstrating an adjustment in 2019, however likely a false negative given excellent rebound in December through February
- Nonresidential performing typical cycle behaviors with some concern for office/bank/retail activity in 2018 and 2019
- Infrastructure needs, improved state and local balance sheets and political alignment fueled slow, steady growth in spending

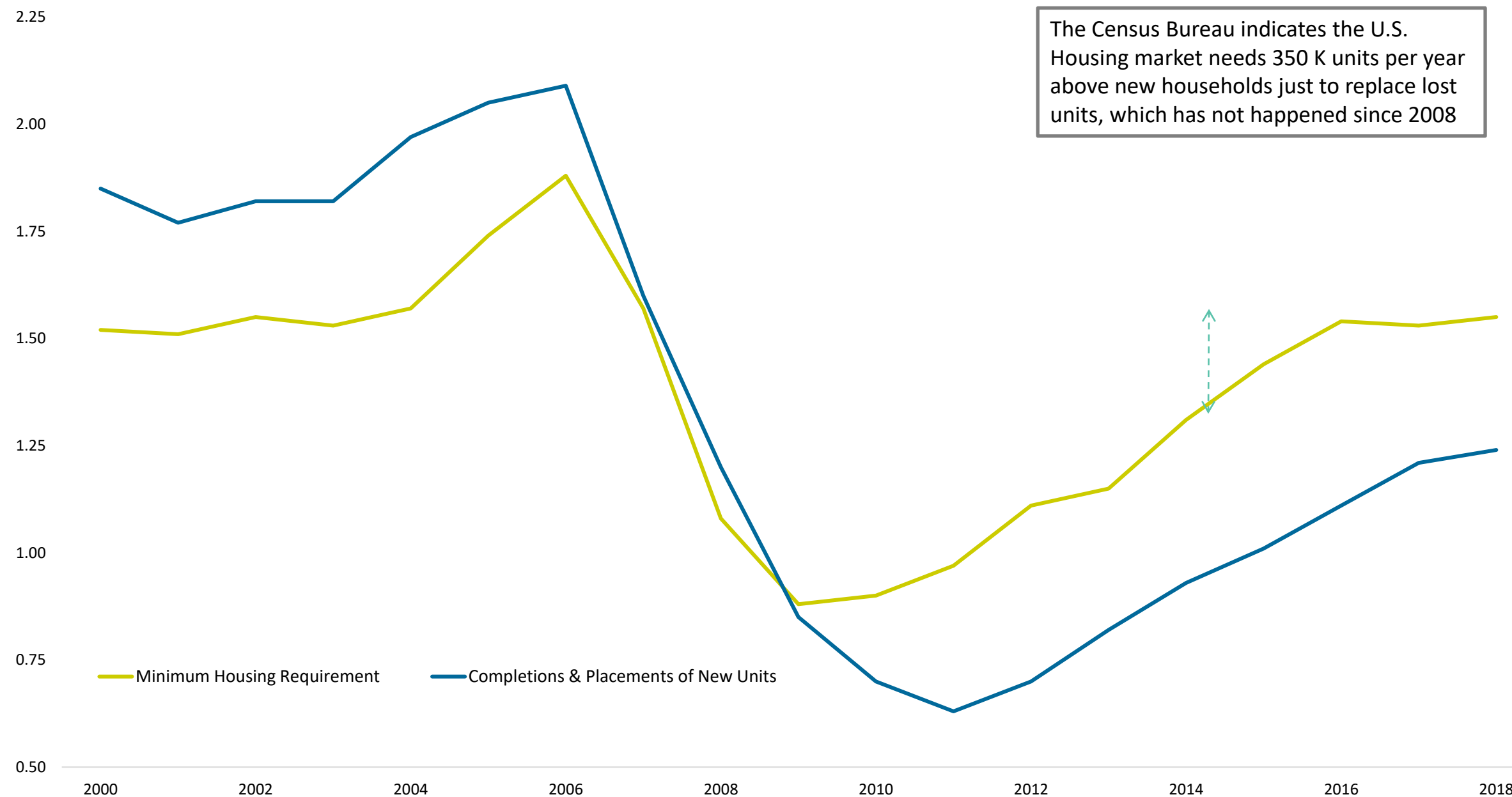
Sources: Census, NAHB, AIA, FRED, CBRE, HUD, NAR, Ducker Interviews and Expertise

Construction Has Not Kept Up with Household Growth

Residential construction has not kept pace with the minimum housing requirement – causing a shortage of available supply for new households and likely long-term benefits beyond 2020.

MINIMUM HOUSING REQUIREMENTS VS. COMPLETIONS & PLACEMENTS OF NEW HOUSING UNITS

Millions of units

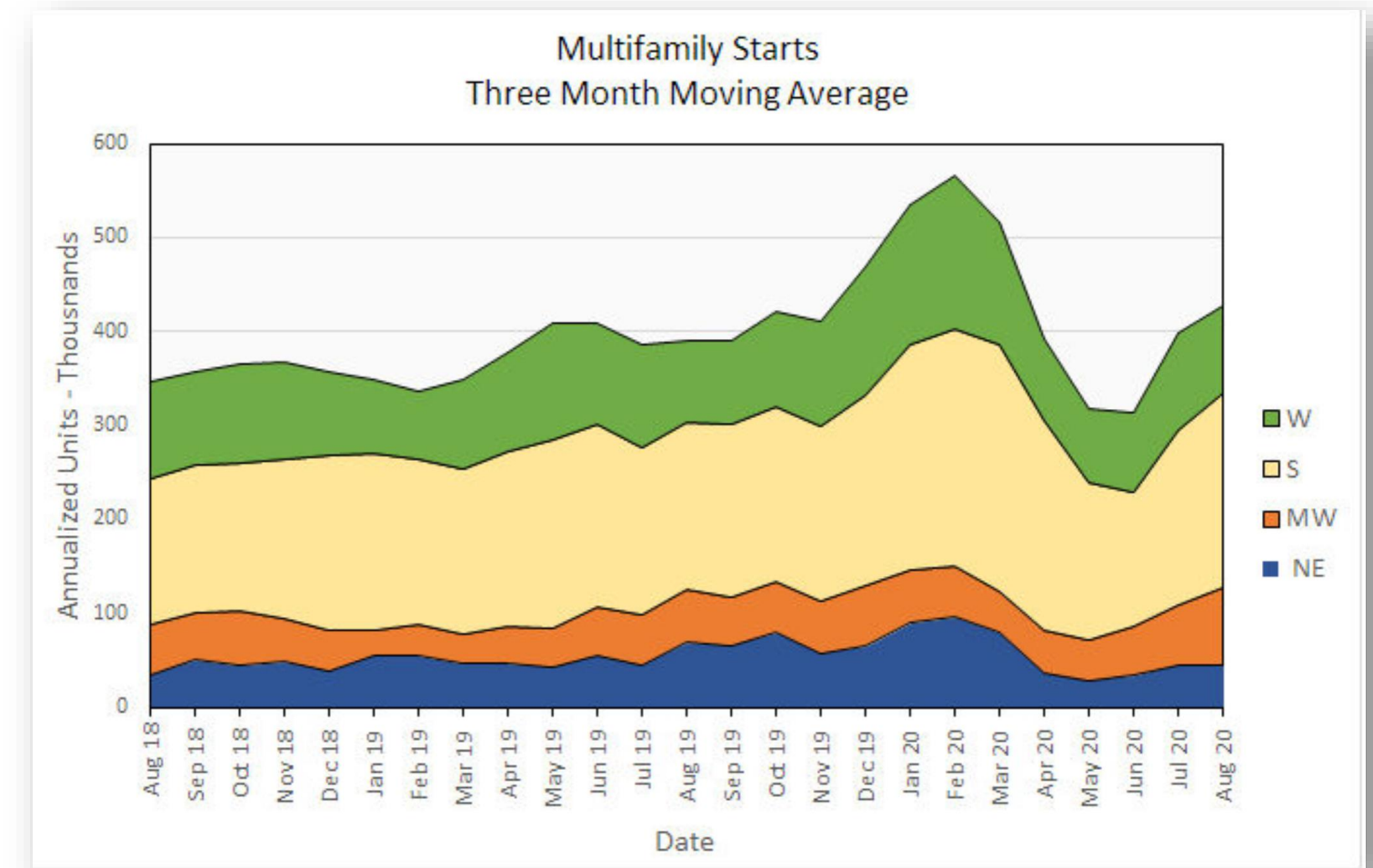
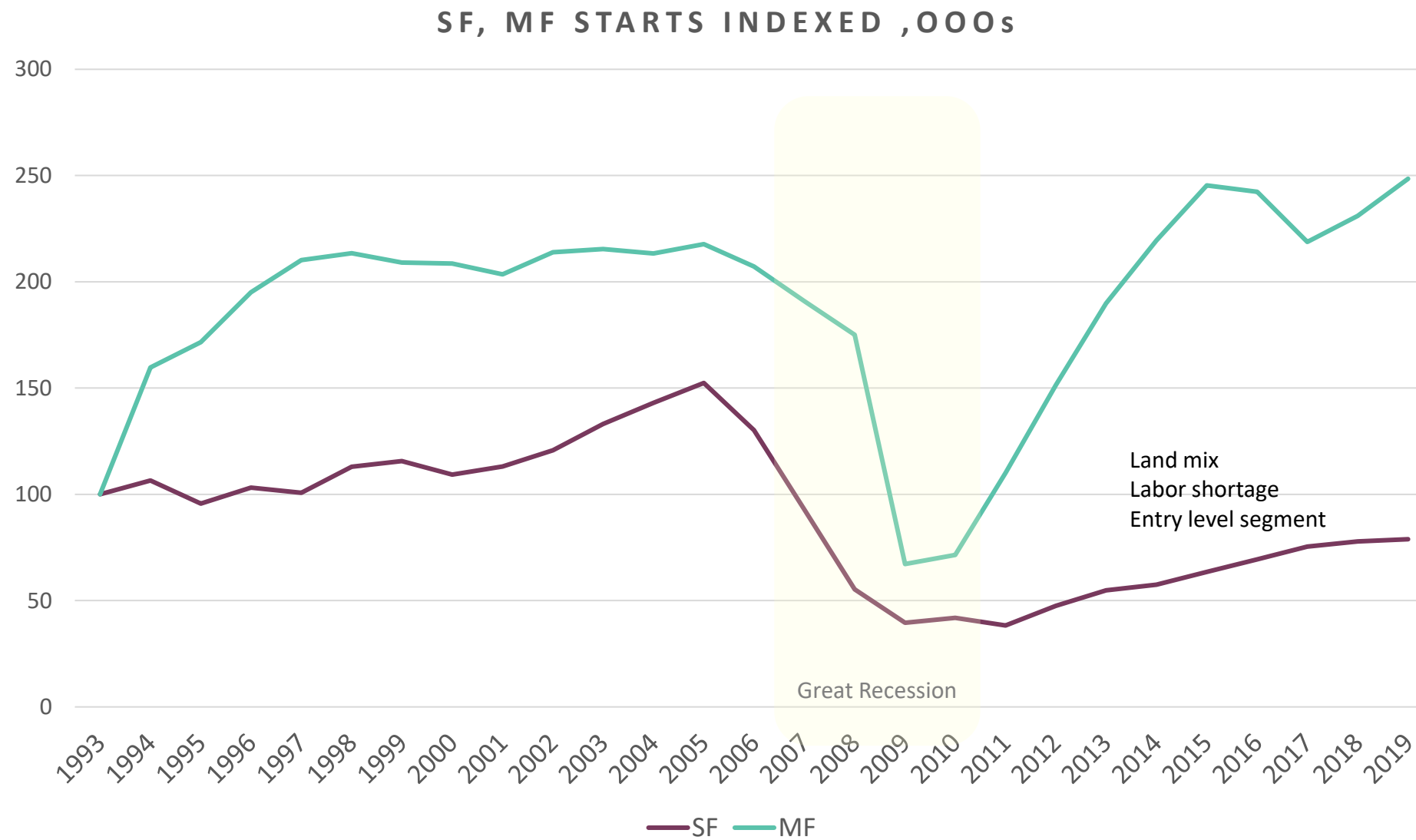


- After a decade of low levels of building due to conservative development plans, housing stock is currently well short of US demand
- In 2017 Freddie Mac estimated the U.S. was **~2.5 million** housing units below what is needed to match long term demand, with an annual rate of construction **~370,000 units** below the level required to meet demand
- Single family builders cite labor shortages, profitability concerns, and land economics/availability as reasons for inability to meet full demand and likely a long runway of build potential
- New SF home rental communities looking to fill the gap

Sources: Ducker Analysis, JCHS, Freddie Mac

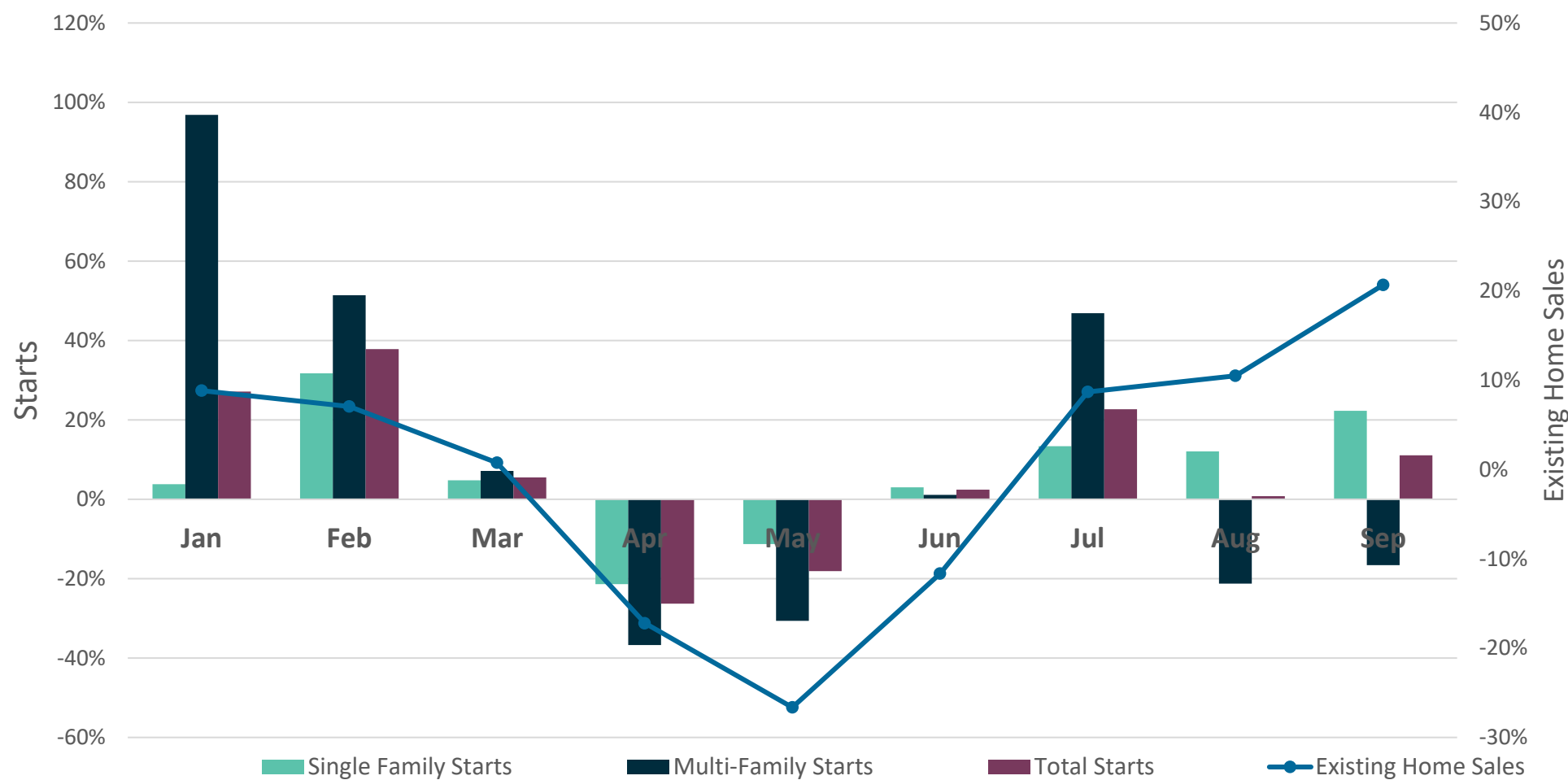
Industry Insights Leading Up to COVID CRISIS

Multifamily has outperformed single-family for the last several years. Very strong start to 2020 pre COVID and opportunities will continue long term, particularly in nonurban areas for low - and mid-rise projects (rental living increases relative to ownership)



Sources: Census, NAHB, AIA, FRED, CBRE, HUD, NAR, Ducker Interviews and Expertise

Multi-family has outperformed single family for the last several years but has been more volatile through the COVID crisis. Single family to be the growth driver going forward, particularly in nonurban areas



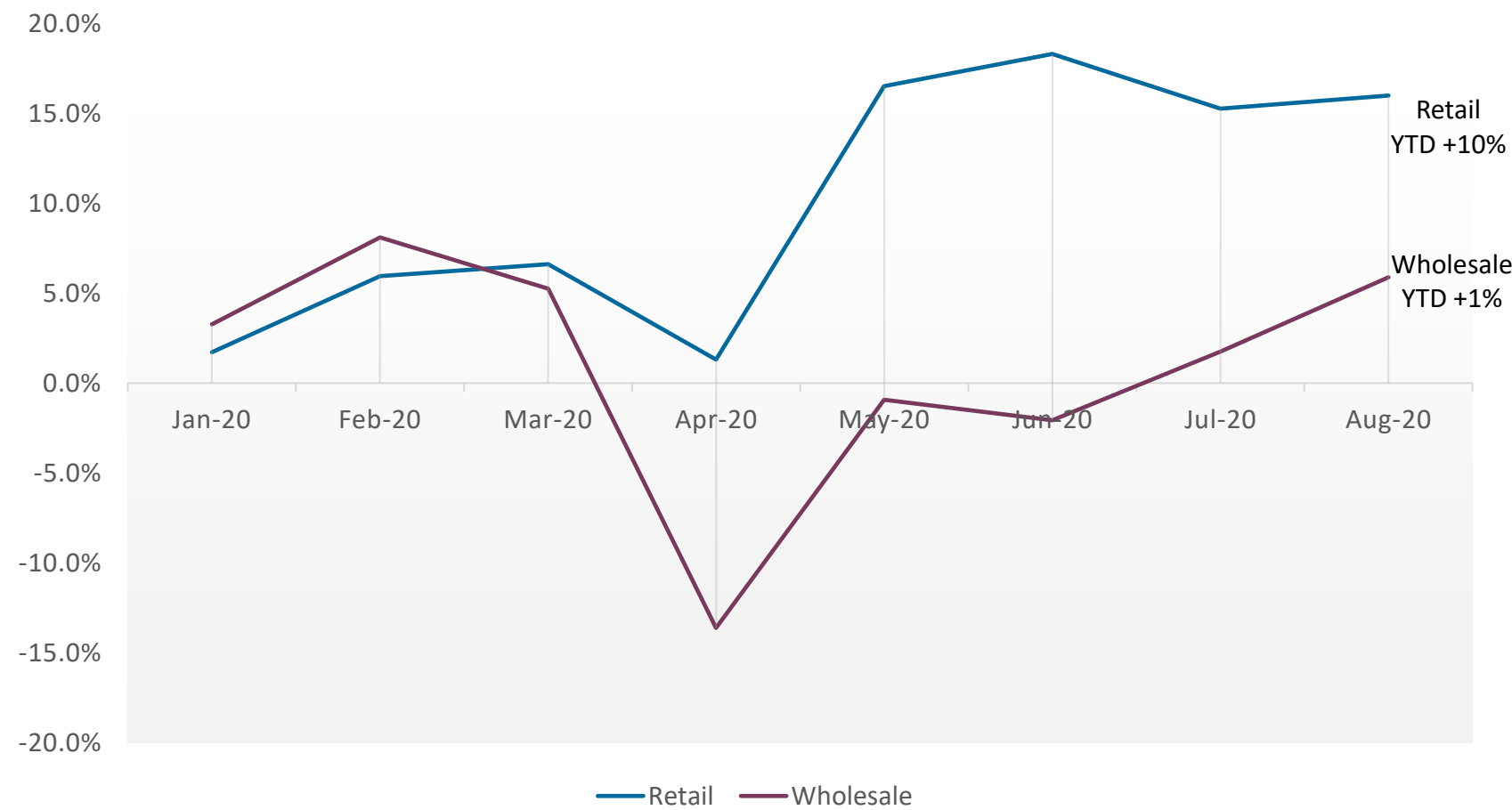
Housing Starts ('000)	2019A	2020F	change	2021F	change
Single Family	888	938	+6%	1,047	+12%
Multi-Family	402	410	+2%	349	-15%
Total Starts	1,290	1,348	+4%	1,395	+4%

- Housing starts recovered rapidly after April-May collapse led by single family activity
- Single family September YTD up 4 percent over prior year. Multi-family up 10 percent
- Similar V curve for existing home sales which rose to a new 14 year high in September
- Home sales still 2% behind 2019 YTD
- Activity still constrained by a lack of inventory but delayed selling season - low interest rates and millennials coming to the market have fueled strong demand

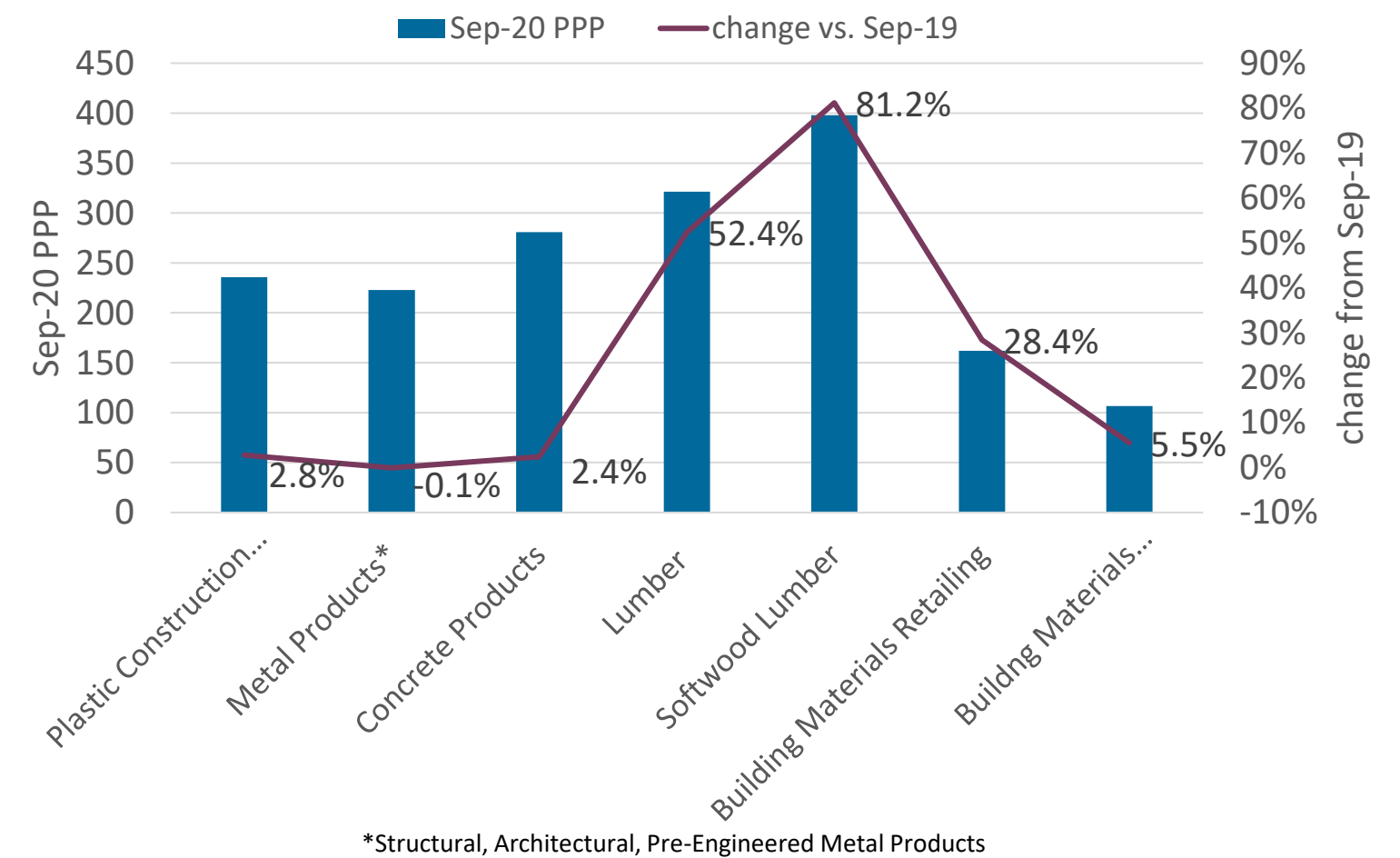
Sources: Census, NAHB, AIA, FRED, CBRE, HUD, NAR, Ducker Interviews and Expertise

- Retail building material expenditures have driven the growth in construction activity - significantly outpacing wholesale expenditures
- Price increases over the past year for most material categories, led by lumber and softwood lumber pricing
- Cost of new home builds increasing up to 20% from initial budgets

YEAR-ON-YEAR CHANGE IN CENSUS BUILDING MATERIAL EXPENDITURES



SEPTEMBER PRODUCER PRICE INDEX, 12 MONTH CHANGE

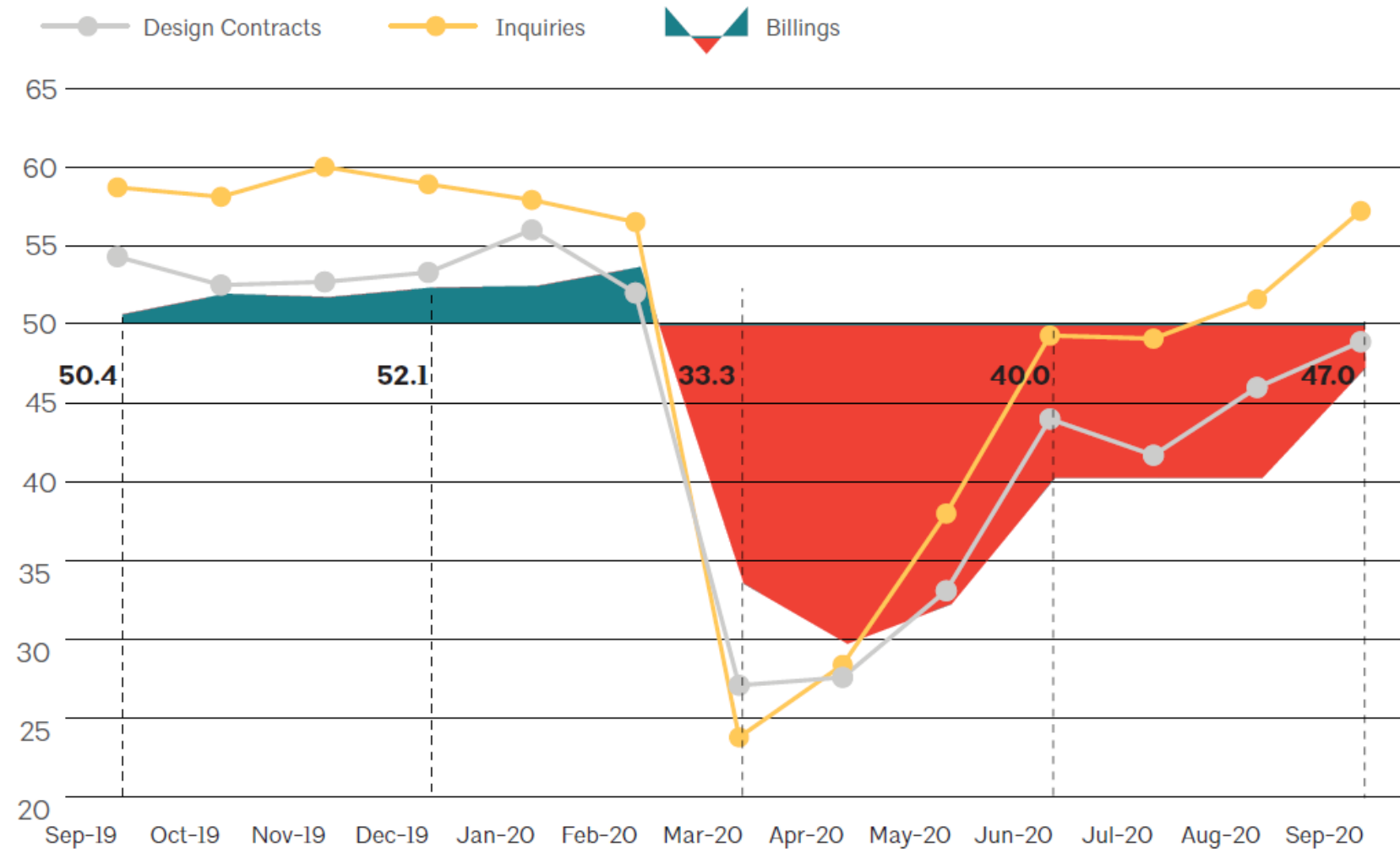


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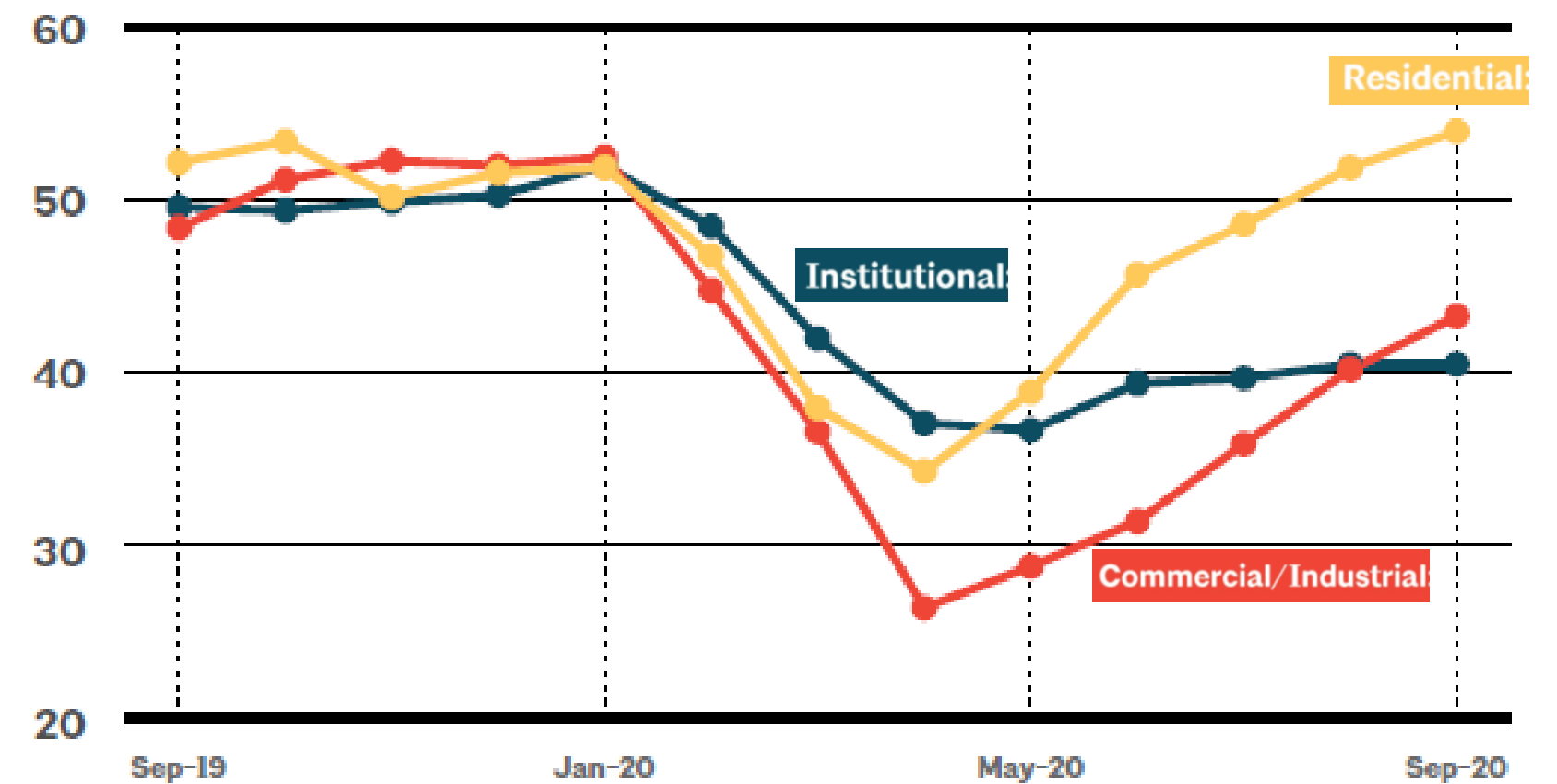
AIA Indicators and Recovery

A healthy, early indicator of future construction and major remodeling activity is the AIA/ABI Index on activities, inquiries and sentiment across the architectural community. Data through September show improving conditions with a steady increase in inquiries.

ABI ACTIVITY TRACKING



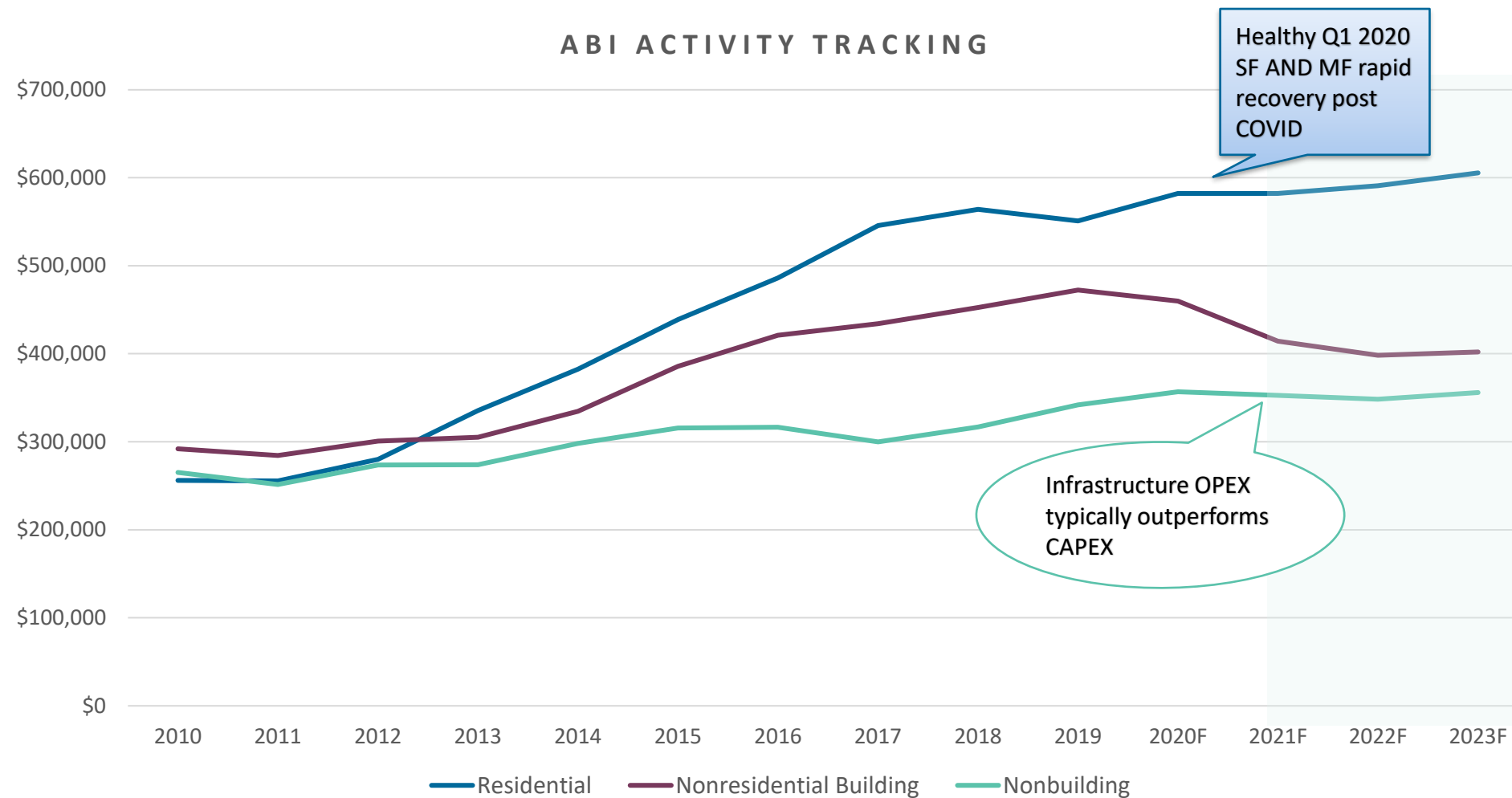
AIA SENTIMENT FOR SERVICES BY BUILDING TYPE



- Since mid-May – inquiries increasing at significant rate for architectural and design services, both for new construction but also for built out and remodel for post-covid environment – occupancy protection, management, densify/open plan etc.
- Contracts kept pace through early July - rebound after holiday vacation dip and slower processes to award work
- Broad categories of commercial and industrial had the biggest decline but also are seeing a V shaped recovery given scale of demand and opportunities across many geographies and applications

Sources: Ducker, AIA

CONSTRUCTION (\$) PIP FORECAST – OCTOBER 2020 SCENARIO FOR FUTURE (POST-COVID) OPTIMISTIC



Residential - rapid recovery after spring drop. Single family strength with low interest rates and new market entrants unleashing short-term pent-up demand. Flattening over next 2 years with lagged impact of severe economic downturn dampening continued increase in existing home sales.

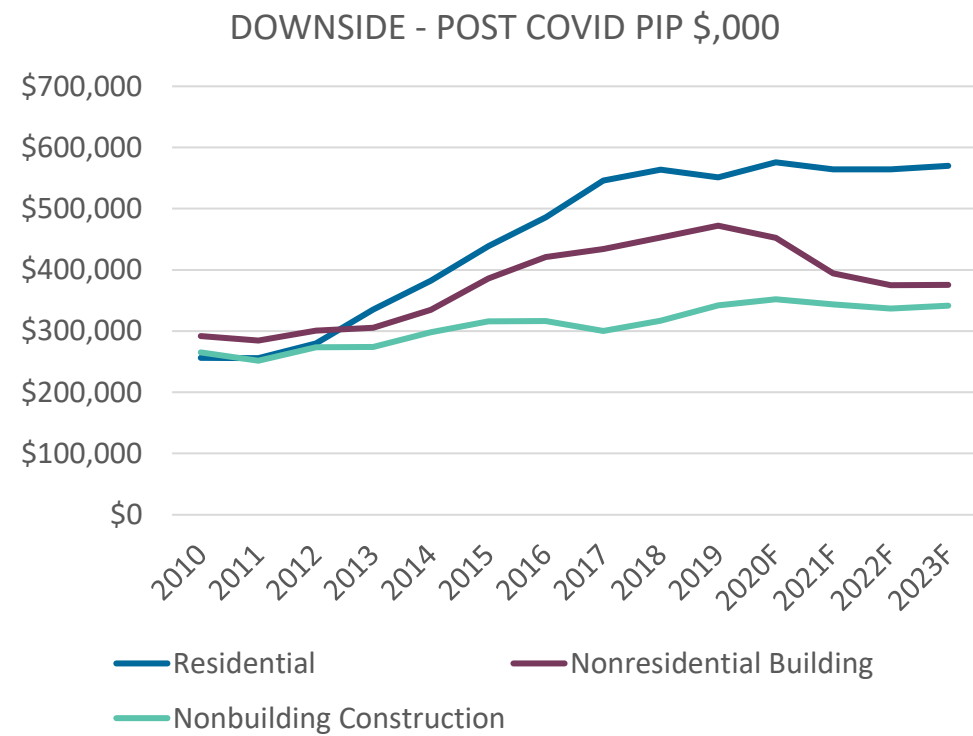
Nonresidential - greater negative impact and declines for a period depending on suburban growth, vaccine. Healthcare and services offer unique opportunities of demand.

The long-term growth of **infrastructure** will pause until Federal stimulus kicks in. Some tail of activity will continue due to recent bonds passage and multi-year funded projects. Future local government balance sheets likely to be strained – tax revenues down, reducing project spend and a lag period of impact. OPEX likely to outperform CAPEX.

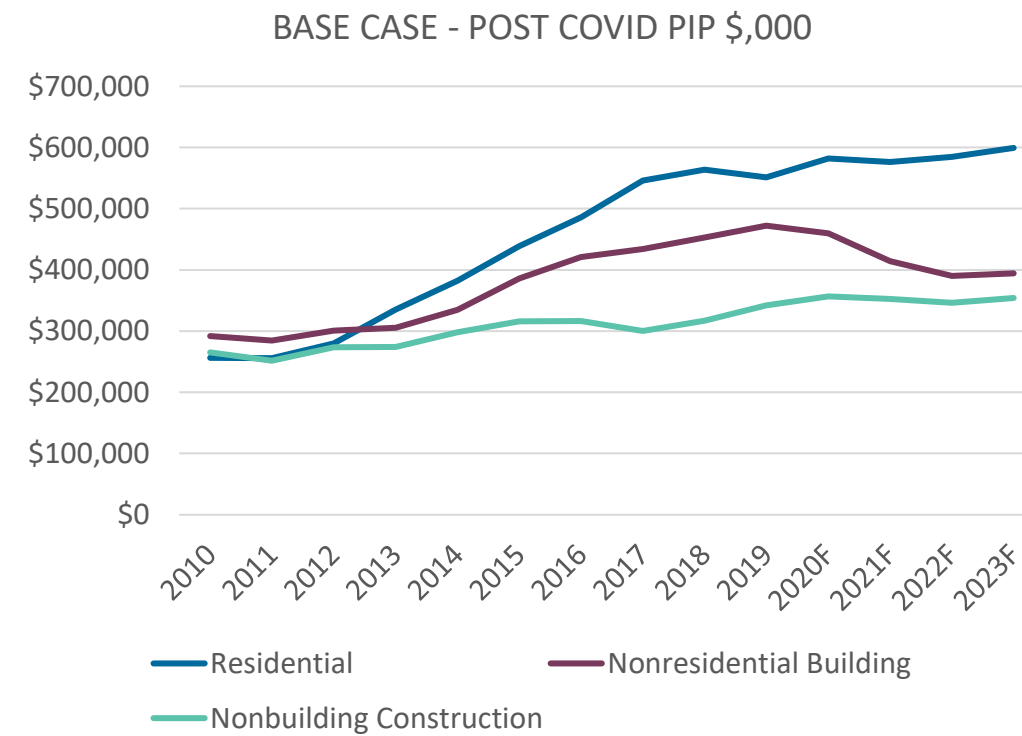
Sources: Census, NAHB, AIA, FRED, CBRE, HUD, NAR, Ducker Interviews and Expertise

CONSTRUCTION (\$) PIP FORECAST – APRIL 2020 SCENARIO FOR FUTURE (POST COVID)

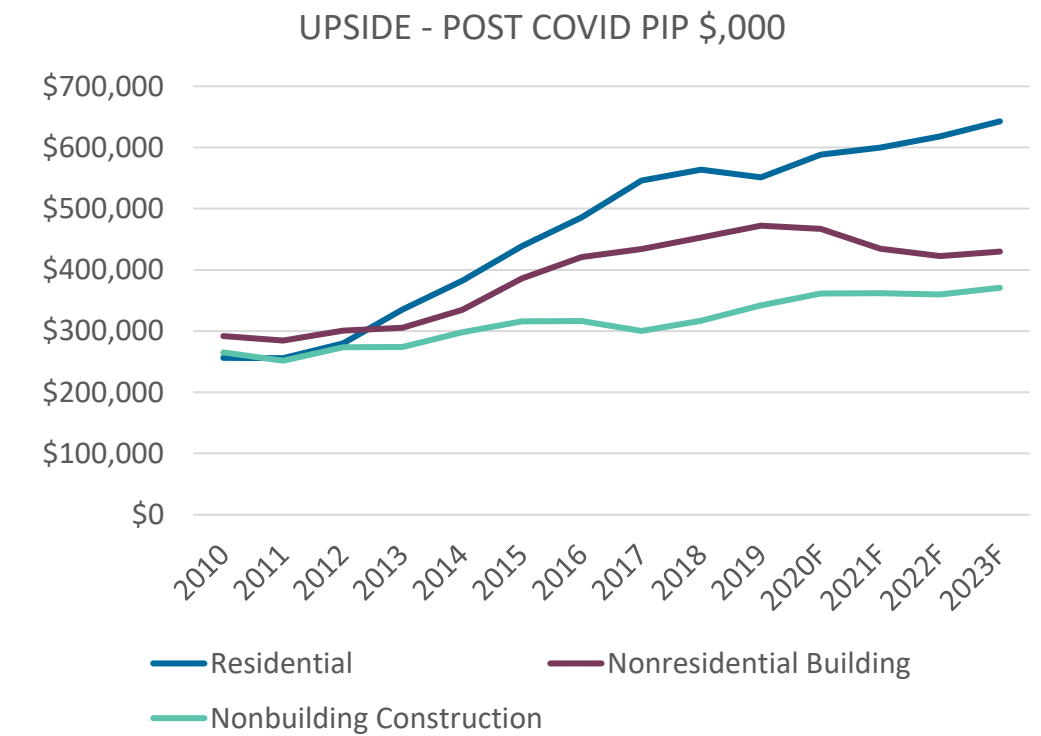
All scenarios show an overall decline but with different projections for each segment. Residential housing impact very different to previous recession and shorter and less severe than originally forecasted. Non-residential building hardest hit and recovery likely to be delayed for 2 to 3 years. Nonresidential building dependent on future government policy.



2019-2023 CAGR	
Residential Building	0.9%
Nonresidential Building	-5.6%
Nonbuilding Construction	0.0%
Total PIP Construction	-1.5%



2019-2023 CAGR	
Residential Building	2.1%
Nonresidential Building	-4.4%
Nonbuilding Construction	0.9%
Total PIP Construction	-0.3%



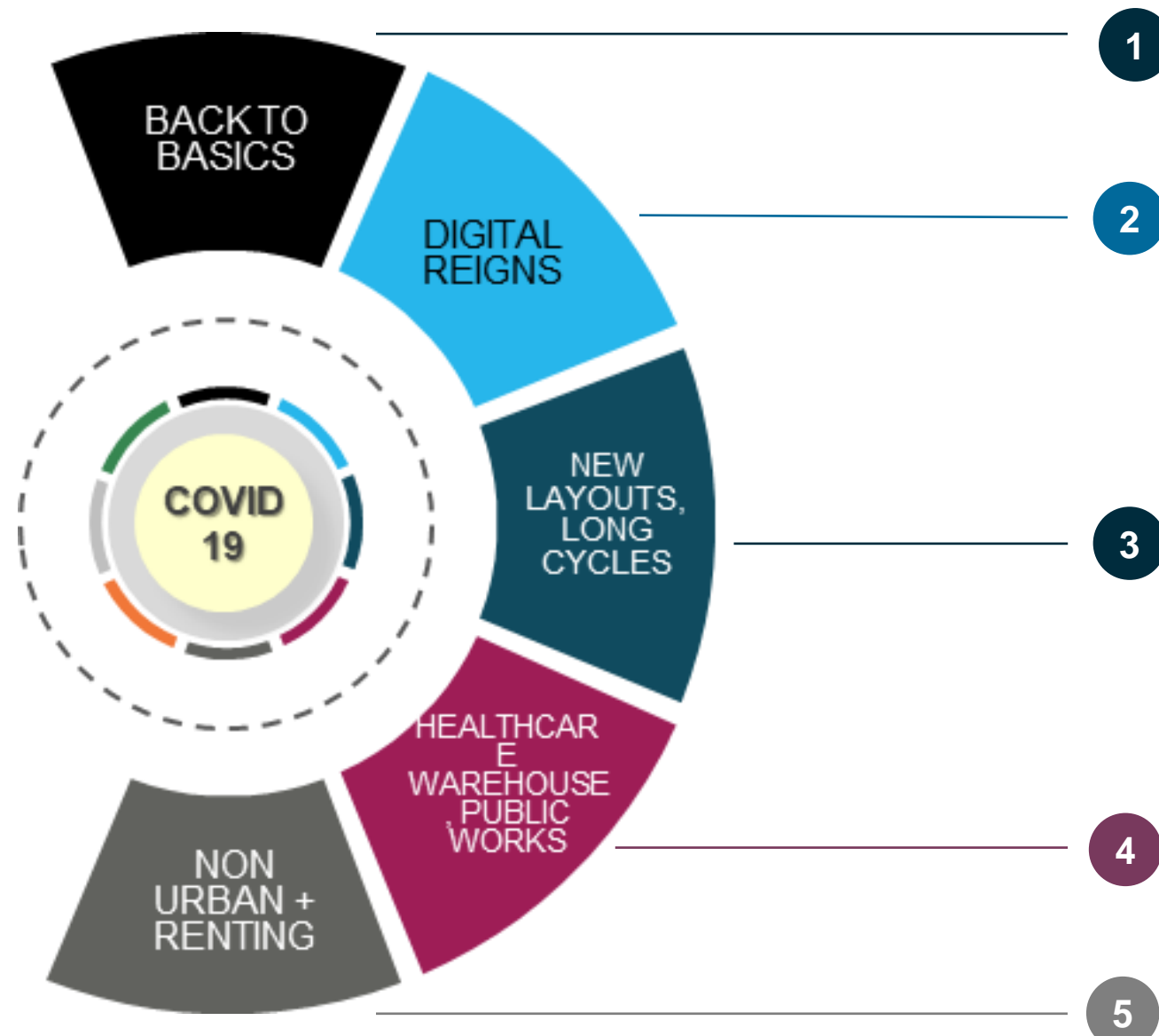
2019-2023 CAGR	
Residential Building	3.9%
Nonresidential Building	-2.3%
Nonbuilding Construction	2.1%
Total PIP Construction	1.4%

Sources: Census, NAHB, AIA, FRED, CBRE, HUD, NAR, Ducker Interviews and Expertise

Five Key Factors Representing New Norm in Construction

The COVID crisis has shifted practices, housing preferences and regional construction dynamics offering new opportunities with new strategies and business models.

POST VIRUS SOCIETY DRIVES A NEW NORM IN CONSTRUCTION



- 1
 - Severe shock to society drives conservancy in spending, balance sheet and affordability
 - *Refocus on what's most important to protect, maintain business and living*
 - Building owner and homeowners focus on home improvement and "quality of home"

- 2
 - *Accelerating digitalization in each stage of design and construction process*
 - Governments upgrading communications, digital competencies
 - Network bandwidth expansion for infrastructure across public, private data demand

- 3
 - Purposeful, disciplined construction process that favors longer cycles, prefab construction
 - *Decrease in open plan environments, increase in private spaces (social distance friendly)*
 - Increased square footage in demand, value trade-off against premium finishes

- 4
 - Increase in storage, warehousing and multi-function areas
 - Healthcare facilities upgrade, retrofit and build out
 - Expanding distribution and last-mile storage/delivery
 - Finally addressing infrastructure needs – road and communications investments

- 5
 - Growth of lower density construction areas – suburban, rural in demand
 - *More renting- rental communities with homes, single payment will thrive*
 - Luxury and Custom construction/remodel to lead the rebound in 2021
 - *Bump to existing home sales and remodeling outside of large urban areas*

01

Business Profitability

- Profitability of select producers and suppliers far better through the crisis than forecasted – some note record quarterly performance
- Financials lifted through improving demand, lower SG&A costs and ability to sell out inventories
- Lower cost of sales with favorable input prices helped several sectors outperform adjusted forecast or YOY targets

02

Significant Pricing Dynamics

- Import challenges increase domestic source demand and improve average pricing through the channel
- Lumber price appreciation significant- negative impact to framing and new housing costs
- Resin/plastic price favorability leading contributing to improved cost basis and better margins - remodeling
- Many sectors launching price increases for early 2021 - ranging from 4-9% upside

03

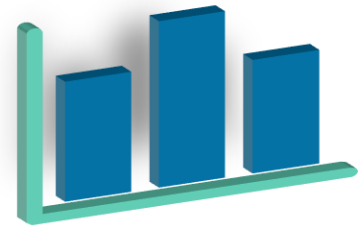
Big Box Retail Performance

- Essential business status led to significant store traffic and purchases by DIY and DIFM
- Transition from renter to home-buyer increased variety of interior project/décor spend
- New digital programs by Lowe's and Home Depot – and healthy inventory attracted professionals

04

Continued home remodeling, outdoor and exteriors pent up demand

- COVID themes and risks driving more outdoor living, family and pet friendly environments
- Migration from apartment living to existing single-family increasing upgrades and improvements
- Long lead times for windows, siding, fencing, decking will create pent-up demand through Q2 2021 as industry works to balance new construction growth and remodeling demand



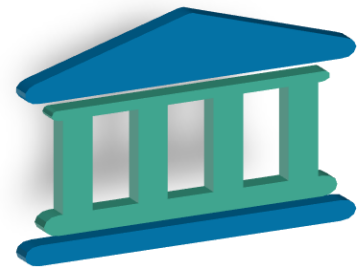
Nonresidential Backlog

While nonresidential, new construction reached peak in late 2019, starts in Q4 allowed progress on backlog through Q3 2020 –however, future activity likely to slow with completion of backlog and reduction in permits/starts.



Delayed Office Vacancy Decline

Federal and state stimulus helped businesses complete lease payments through the early COVID crisis. Some businesses returning. Full affect of office vacancy and lease levels yet to be experienced with many implementing office layout improvements or posting return to office in H2 2021.



Building Stock MRO and Reset

Aging nonresidential building stock still represents a *significant opportunity* for the industry. Planned expenditures and major improvements paused in April/May but resumed in June with many MRO participants. Interiors redesign post-COVID to enclosed workspaces represent new opportunities for occupancy safety, health and design.



REIT \$ Shift to Detached Rental Housing

With pressures on nonresidential lease rates, vacancy levels and new construction projects, more REIT development and investment moving funds to address trend in large single-family rental communities. New partnerships and ventures forming with REIT players and independent builder/developer - new trend to watch in 2021.

1

Election Outcomes and Labor Conditions

- Level of additional stimulus
- Environmental regulations
- Infrastructure funding
- Tax and regulatory policy
- State level budget rescue
- Housing affordability measures
- Labor shifts/gaps in construction

2

Commercial Vacancy & Return to Work

- Urban center vacancy rate evolution
- Corporate return to work deadlines
- Remodel and reconfiguration spend
- Productivity levels and pace
- Tier 3 city expansion/construction
- REIT investment shifts

3

M&A Transaction Valuations

- Valuation level, multiples obtained for successful transactions
- Growth of corporate carve-outs
- Potential for public to private transactions
- Rebalancing portfolios
- Digital technology/PaaS additions

4

Digital GTM & Disruptive Customer Journey

- Accelerations of digital commerce
- Development of new sales and specification digital process
- Disruptive Amazon and last mile distribution affect
- Outcomes for new customer journey strategies

For a more comprehensive analysis of these developments, please look for Ducker's 2021 Industry Outlook and Key Opportunity/Risk Analysis for the US construction industry coming in early 2021

DUCKER'S WORK ACROSS THE CORPORATE AND PRIVATE EQUITY SPECTRUM YIELD IMPORTANT NEW DISCIPLINES AND AREAS OF FOCUS FOR BEST-IN-CLASS BUILDING PRODUCT BUSINESSES FOR POST COVID SUCCESS.

BNC CORPORATE STRATEGY FOCUS

Portfolio and
Market Mix
Optimization

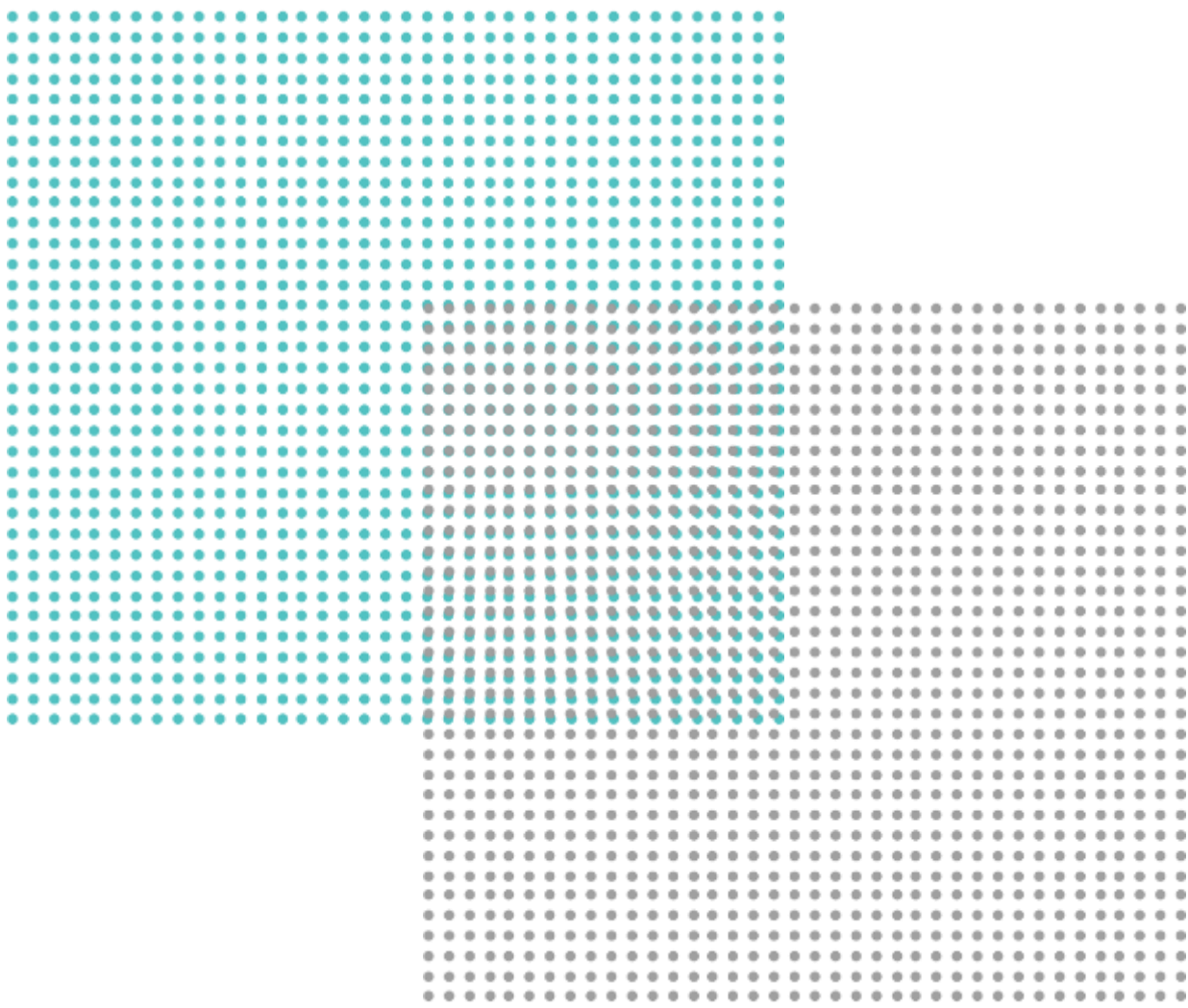
Digital Channel
and UX Experience
Update

Pricing Audits and
Program
Optimization

Adjacency Profile
and Pursuit

Innovation:
Product, Service,
Business Model

Modular Systems
and Design-to-
Install Programs



THIS CONCLUDES OUR PRESENTATION. THANK YOU.

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