

MEDIA RELEASE

BCA: SINGAPORE'S CONSTRUCTION DEMAND FOR 2020 EXPECTED TO REMAIN STRONG

- Built environment sector urged to look ahead, invest in digitalisation, innovation-driven growth and groom local talent to tackle uptrend of larger and more complex projects

Singapore, 8 January 2020 – The Building and Construction Authority (BCA) projects the total construction demand (value of construction contracts to be awarded) to remain strong in 2020 with sustained public sector construction demand. The total construction demand is expected to range between S\$28 billion and S\$33 billion this year.

2. Public sector construction demand, which is expected to reach S\$17.5 billion and S\$20.5 billion this year, will make up about 60% of the projected demand for this year. Public sector construction demand is expected to be spurred by major infrastructure projects, which are larger and more complex in scale, such as the Integrated Waste Management Facility, infrastructure works for Changi Airport Terminal 5, Jurong Region MRT Line and Cross Island MRT Line.

3. Private sector construction demand is projected to be between S\$10.5 billion and S\$12.5 billion this year, supported by projects such as redevelopment of en-bloc sale sites, recreational developments at Mandai Park, Changi Airport new taxiway and berth facilities at Jurong Port and Tanjong Pagar Terminal. The forecast for 2020 excludes any construction contracts by the two Integrated Resorts (IRs) pending confirmation on the timeline and the phasing of the expansion projects.

4. Last year's total construction demand expanded by 9.5% to reach \$33.4 billion, about \$1.4 billion higher than the upper bound of BCA's 2019 forecast of \$27 billion to \$32 billion, mainly due to a stronger than expected increase in industrial construction demand for petrochemical facilities despite the slowdown in manufacturing sector. Total preliminary construction demand last year for the public and private sector was S\$19 billion and S\$14.4 billion respectively.

Medium Term Forecast for 2021 to 2024

5. Construction demand is expected to hold steady over the medium term. Demand is projected to reach between S\$27 billion and S\$34 billion per year for 2021 and 2022 and between S\$28 billion and S\$35 billion per year for 2023 and 2024.

6. The public sector will continue to lead demand and is expected to contribute S\$16 billion to S\$20 billion per year from 2021 to 2024 with building projects and civil engineering works each taking up about half of the demand. Besides public residential developments, public sector construction demand over the medium term will continue to be supported by various mega infrastructure projects. BCA expects private sector construction demand to stay at a moderate level in view of the likely continued global economic uncertainties and the current overhang in the supply of private residential housing units. Nonetheless, the planned expansion of the two Integrated Resorts could provide further upside to private sector demand, depending on their eventual construction timelines and phasing.

Construction Output

7. Total nominal construction output in 2020 is projected to increase to between S\$30 billion and S\$32 billion, from the estimated S\$28 billion in 2019. The anticipated further pick-up in total construction output in 2020 is supported by the improved construction demand since 2018 following the slowdown in 2015 to 2017.

Year	Construction demand (Value of contracts awarded, S\$billion)			Construction Output (Value of certified progress payments, S\$billion)
	Public	Private	Total	Total
2019 p	19.0	14.4	33.4	28
2020 f	17.5 – 20.5	10.5 – 12.5	28 – 33	30 – 32
2021 – 2022 f	16 – 20 per year	11 – 14 per year	27 – 34 per year	
2023 – 2024 f		12 – 15 per year	28 – 35 per year	

p: Preliminary f: forecast

Continuing our industry transformation efforts

8. Since the launch of the Construction Industry Transformation Map in 2017, the industry has been using newer and more advanced technologies to improve construction processes and methods and ultimately creating new and better jobs for those working in the sector. For example, more projects are adopting Design for Manufacturing and Assembly (DfMA), where a substantial portion of work is now done in a controlled manufacturing environment before it is transported to site for assembly. The DfMA adoption rate by the industry shows an improvement from 22% in 2018 to about 30% in 2019, which is a good progress towards the target of 40% by 2020.

9. The public sector, for example HDB, will continue to take the lead in adopting DfMA in their building projects where 75% of all its units launched in 2020 will adopt DfMA methods such as Prefabricated Pre-finished Volumetric Construction (PPVC) or Advanced Precast Concrete System (APCS). Please refer to **Annex A** for details on PPVC and APCS.

10. The transformation efforts have also led to the redesign or creation of new and better jobs, such as digital lead and DfMA production manager within the sector.

11 With the positive outlook in the medium term, Mr Zaqy Mohamad, Minister of State for National Development and Manpower, urged the industry to continue investing in a skilled and competent local workforce who will lead and drive the built environment sector into the future.

12. BCA is also working with industry partners on initiatives to attract more fresh graduates and mid-careers into the sector, as well as a skills framework to chart out career progression pathways which will be launched later this year.

Issued by the Building and Construction Authority on 8 January 2020

About Building and Construction Authority (BCA)

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. BCA's mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, it aims to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, its vision is to have "a future-ready built environment for Singapore". Together with its education arm, the BCA Academy, BCA works closely with its industry partners to develop skills and expertise that help shape a future-ready built environment for Singapore. For more information, visit www.bca.gov.sg

Prefabricated Prefinished Volumetric Construction (PPVC)

1. PPVC refers to a construction method whereby 3-dimensional modules are completed with internal finishes, fixtures and fittings in an off-site manufacturing facility before it is delivered and installed on-site.



2. The key benefits of PPVC include:

- a) Improved Productivity

PPVC can potentially achieve productivity improvement up to 40% in terms of manpower and time savings, depending on the complexity of the projects.

- b) Better Construction Environment

As bulk of the installation activities and manpower are moved off-site to a factory- controlled environment, it can minimise dust and noise pollution and improve site safety.

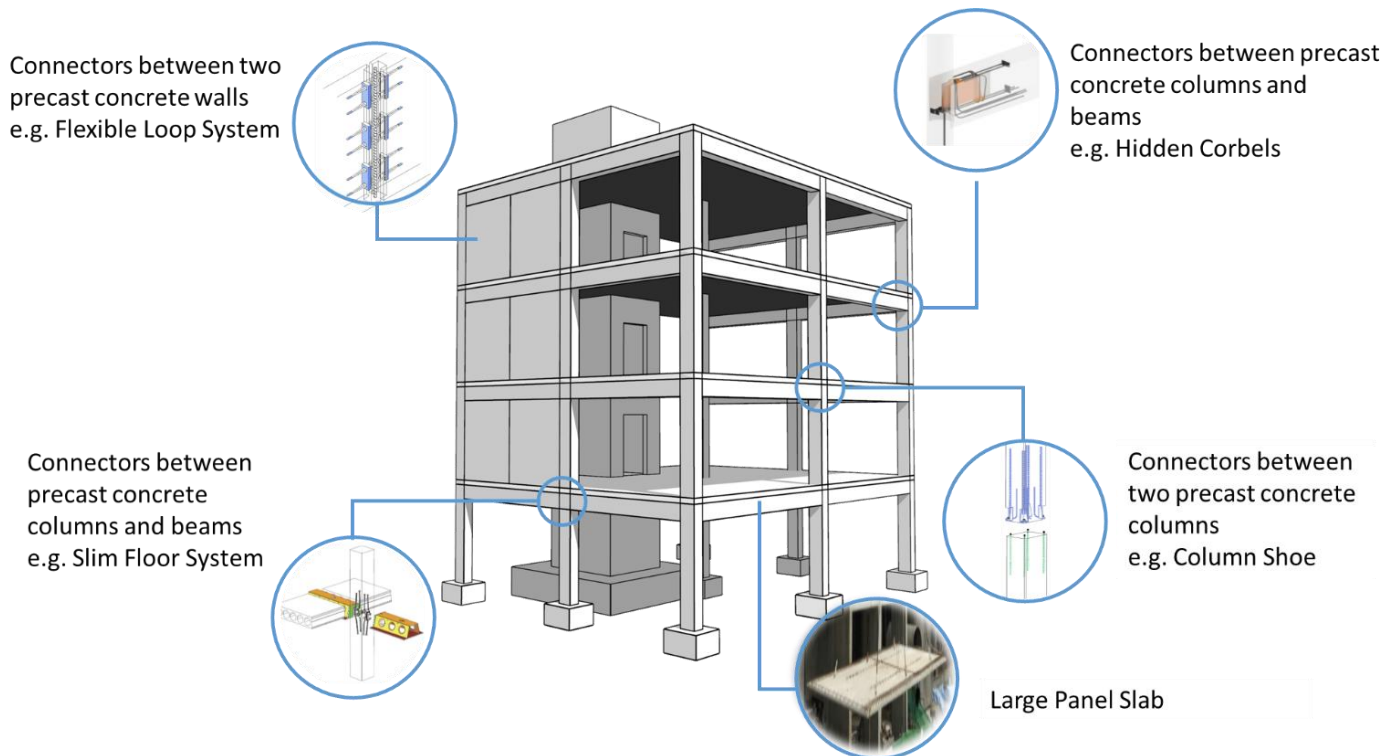
- c) Improved Quality Control

Off-site fabrication can result in better quality end products through quality control in a factory-like environment.

Advanced Precast Concrete System (APCS)

1. APCS refers to a construction method that adopts large precast concrete (PC) components and/ or the use of mechanical connection systems to join two or more PC components under the '3S' principles of Standardisation, Simplicity and Single Integrated elements

Examples of the features are illustrated in the image below:



2. The key benefits of APCS include:

- a) Ease of on-site assembly

Simplified structural design and connections made it easier for precast concrete components to be assembled on-site

- b) Improved productivity

Reduced need for concreting work on-site which can lead to productivity improvement of up to 20% in terms of manpower and time savings

- c) Improved Quality Control

Wider adoption of automation and having precast concrete components manufactured in a controlled factory environment allows for better precision and quality standards