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Subject: (Embargoed) Speech by SPS A/P Koo Tsai Kee, 28 April 2000, 2 pm

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**SPEECH BY ASSOC PROF KOO TSAI KEE, SENIOR
PARLIAMENTARY SECRETARY, MINISTRY OF NATIONAL
DEVELOPMENT, AT THE FORUM ON LEGISLATION OF
BUILDABLE DESIGN AT MND AUDITORIUM ON FRIDAY, 28
APRIL 2000 AT 2.00 PM**

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Introduction

1 The problem of low productivity and heavy dependence on unskilled foreign workers has plagued our construction industry for the past 2 decades. At the peak of construction activities in 1997 and 1998, we were swarmed by more than 200,000 such workers. This is unmanageable for a small nation like Singapore. Various ad hoc policies and measures in the past to deal with the problem had little success. It is time we make a determined effort to raise our construction productivity and reduce our dependence on foreign workers.

Legislation of Buildable Design

2 A key recommendation of the Construction 21 report was to legislate buildable design. This will be implemented by Jan 2001. The aim of this legislation is to raise the labour efficiency of the construction industry. In tandem with the improvement in buildability, the Ministry of Manpower will progressively cut down the foreign workers' Man-Year Entitlement (MYE) for construction projects. The target is to cut MYE by 50 % by year 2010, or earlier. Our preference is to move earlier. These measures will provide the incentives for us to really tackle the age-old problem of over-dependence on foreign unskilled labour.

Working Together with the Industry

3 We have to solve the problem as a team. Whether you are a developer, consultant, contractor or government agency, none of the parties involved with the real estate and construction sector can distance itself from this effort.

4 I am therefore very pleased that all the professional associations and institutions have pledged their full support for the implementation of the buildable design legislation. In fact, they have played a very active role in the preparation for the legislation of buildable design. The Presidents of SIA, IES, ACES, REDAS, SCAL and SISV were represented in the Buildability Implementation Committee (BIC). The Committee was formed in March last year to ensure the smooth implementation of this legislation. The Code of Practice for the Legislation of Buildable Design, which is being launched today, was prepared with the help of the BIC. Suggestions and feedback were also obtained through a series of dialogue sessions with the whole spectrum of industry representatives.

Concerns of the Industry

5 These dialogue sessions have surfaced a few common concerns. One of the concerns is the public acceptance of the use of prefabricated components. Although these have been accepted and used widely overseas, they have yet to gain full consumer acceptance here. The prefabricated internal walls are one such example. Home owners here are often concerned whether the walls could mount heavy objects like TVs or loaded cabinets or if the walls could serve as good sound insulators. Whilst many are happy with the higher quality and smoother wall

surfaces compared to brick walls, some are also concerned over the joint lines on the walls.

6 Prefab products may not have all the properties of conventional products that are widely accepted by consumers here. Nevertheless, prefab technology is advancing. Prefab products are improving all the time to meet the requirements of consumers. BCA will work with the industry to source for a wider range of products to help designers better meet the demands and preferences of the consumers. At the same time, BCA will promote consumer knowledge and acceptance to dispel any misconceptions and make consumers better aware of the properties of prefab products. BCA intends to start this programme from July.

7 Another concern is whether with buildable designs, the higher degree of standardisation could lead to box-like designs. There is perhaps a mixture of misperception and prejudices here. Standardisation does not mean standard buildings. The Buildable Design Appraisal System (BDAS) has built-in flexibility which enables reasonably high buildability to be achieved with various materials and methods of construction. For instance, those who are familiar with BDAS will know that, besides precast concrete, flat plates (or beamless design) and steel are alternative structural systems which give high buildability scores. In any case, it is a common misconception that precast construction lacks flexibility. In fact, architectural precast concrete is where creativity and variety can be expressed. Some of the past winners of BCA's annual Best Buildable Design competition are proof that high buildable scores need not lead to monotonous, box-like buildings.

8 The Code of Practice also has a provision (under 4.2.2) for exempting certain buildings that have a uniqueness arising from special functional requirements or landmark projects. Hence, buildings such as places of worship and sites meant for landmark buildings could apply for waiver on a case-by-case basis.

9 Some designers may worry that minimum buildable scores are set too high too soon. The Buildability Implementation Committee (BIC), in determining the minimum scores, has taken care to set them initially at a level that can be achieved with reasonable effort by most of our designers. The industry's performance (in design buildability) in recent years was closely monitored and considered. Lower scores were also set

for buildings with smaller gross floor areas, taking into account their more limited scope to have significant manpower savings through standardisation and precast construction. The buildability scores will then be raised progressively as MYE is progressively cut, and as the industry becomes more familiar and adapt in buildable designs.

Preparation through Training

10 The legislation of buildable design is a radical measure to solve our unique problems. There will probably be some kinks in its implementation, especially in the initial years. But these can be minimised if the industry prepares itself well for the change. Training is the best preparation. Over the past year, BCA has trained more than 1,400 professionals on the Buildable Design Scoring System. BCA is confident of achieving the target of training at least 1,800 professionals by year end so that most of the design firms would be prepared when the legislation becomes effective in January 2001.

11 So far, almost 80 % of the medium-sized and big architectural and engineering consultancy firms have already sent their staff for this training. However, for the smaller firms (i.e. those with 4 or less Qualified Persons), only 97 out of 945, or 11 %, have done so.

12 I would like to urge all small firms to send their staff for training on buildability. BCA, on its part, is taking a very proactive approach by calling up firms individually to arrange their training. I hope that more small firms will respond. The knowledge on buildability scoring will be most useful when such firms take on larger projects (i.e. those with a GFA of 5000 m² or more) which are covered by the buildability legislation.

13 BCA has prepared a very comprehensive education and promotion programme to gear up the entire industry for buildability. These include seminars and courses on various design and construction methods that enhance buildability. There are programmes for workers, supervisors, professionals and contractors. (Details can be found in brochure distributed to the forum's participants.) BCA has also published several guides on various aspects of buildable design to assist the industry.

14 To complement these efforts, BCA is also launching its Website on Buildable Design, today. The Website is a one-stop information source on buildability, providing all relevant and updated information on the Legislation of Buildable Design. They include the Code of Practice, Submission Procedures, the Buildable Design Scoring System, relevant forms, examples of Buildable Designs etc. I urge everyone to make use of the available resources.

Trial Implementation

15 BCA has also started a trial implementation since Oct 1999 on the structural and building plans submission procedures and in computing the buildability scores. More than 30 projects are already participating in the trial implementation of the legislation. BCA welcomes more projects to be included in the trial. All project teams with on-going or new projects are encouraged to take part. BCA also welcomes the use of completed projects for the trials. The trials can involve projects with a GFA of 5000m² or less, even though they are not covered by the buildability legislation. This is because the objective of the trial is to familiarise the industry with the submission procedures and to gather feedback for BCA to fine-tune them. BCA can also suggest projects if firms are unable to think of any to use to participate in the trial implementation.

16 I would like to take this opportunity to urge more firms to take up BCA's offer to participate in the trial implementation. Familiarity with the submission procedures will minimise any delay in a project. Also, the trial implementation can provide a good opportunity for architects and engineers to forge closer working relationship, which is necessary when the buildability legislation takes effect from January next year.

Public Sector will Continue to Lead

17 The legislation will provide the impetus for the private sector to accelerate its pace of adoption of Buildable Design. But there will be no let-up in the public sector either. Public sector projects had been setting the pace in the use of Buildable Design in the past 6-7 years. They have shown that the concept works – their projects use a lot less workers than those of the private sector. The HDB in particular, has, over the years, developed prefab technology to a very advanced level. Many of us will agree that its highly prefabricated designs of recent years are much more

interesting and of better quality than the conventionally designed flats of the early 1980s. In this respect, the rest of the industry can learn much from HDB's experiences.

18 The public sector will continue to lead the effort to improve construction efficiency through better design. To ensure this, the minimum buildability scores set for public sector projects will be a notch higher than those set for the private projects.

Conclusion

19 Finally, I would like to thank all the professional associations for their support and for assisting in the preparation for this legislation. With such concerted efforts, BCA is confident that the perennial problem of low productivity and over-reliance on foreign workers will be solved within the near future.

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