

Sustainable (Vertical) Urbanism, Grounded - Three Case Studies

可持续的（垂直）城市主义，根植于地面——三个案例研究



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Since joining Pei Cobb Freed & Partners in 1998, Jay Berman has contributed significantly to projects encompassing master planning, building design, and public and private development. A central theme in his practice has been an interest in the intersection of design, development, and the political and business contexts in which these endeavors take place. He couples his role as designer and planner with the conviction that crucial choices and the vital synthesis of issues that shape our built environment are inextricably linked to the interplay of interested parties.

从1998年加入Pei Cobb Freed & Partners事务所以来，Jay Berman在包括总体规划和建筑设计和公私合作开发领域的项目作出了突出贡献。他对设计、开发和政治商业语境三者交叉处发生的尝试有兴趣，这也正是他实践工作的核心主题。他将自己的角色双重化——同时作为设计师和规划师，他相信：重大的决定和问题的关键性结合造就了我们建成环境，它们与利益集团之间的相互作用密不可分。

Abstract | 摘要

Tall buildings in an urban context are not neutral: their presence is amplified by large populations; the consolidation of real estate; contrast with adjacent streets, open spaces, and buildings; and the simple fact of their significant visual presence. Moreover, their existence (with few exceptions) as private realms can initially conflict with aspirations to participate in a larger urbanism. This paper examines three master plan case studies – two in Mumbai and one in Osaka – shaped by a conviction that a truly sustainable dense vertical urbanism requires our attention to be focused on the ground, even as our buildings reach for the sky. These three master planned case studies illustrate a range of strategies in which significant urban developments – comprised largely of tall buildings – form, transform, and reinforce unique urbanisms. In different contexts, each project focuses especially on typology, public place-making, and connectivity.

Keywords: India, Japan, Sustainability, Vertical Urbanism

高层建筑很难在城市文脉中保持中立姿态：其存在被聚集的人口所放大；它对周边地产资源有整合作用；与邻近街道、公共空间及建筑形成突出对比；以及显而易见的强烈视觉形象。更为重要的是，他们（有少量建筑例外）作为私人领域的存在和参与更大范围城市化的意愿在本质上冲突。本文将分析三个总平面规划的案例，其中两个位于印度孟买，一个位于日本大阪。它们都遵循同一个理念，即：尽管高层建筑本身面向天空，但真正可持续的高密度垂直城市化要求我们专注其在地面的设计。本文的三个总体规划案例将诠释一系列应用于大型城市开发项目的设计规划策略。这些项目主体都由高层建筑组成，但同时塑造、转化并强化了独特的城市形态。在不同的背景下，每一个项目分别关注了类型、公共空间营造和连通性的因素。

关键词：印度、日本、可持续性、垂直城市化

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This paper examines three master plan case studies shaped by a conviction that a truly sustainable dense vertical urbanism requires our attention to be focused on the ground, even as our buildings reach for the sky.

Three master plan case studies illustrate a range of strategies in which significant urban developments – comprised largely of tall buildings – have been conceived to be reciprocal, nurturing, and sustainable, relative to existing and emerging local urbanisms. The first, located on a 115-hectare greenfield site at the edge of central Mumbai, illustrates an urbanism largely formed by tall buildings. The second, located on a 20-hectare brownfield site adjacent to Osaka’s central station, demonstrates an urbanism substantially

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本文将分析三个案例，它们反映出相同的规划信念，即真正可持续的高密度垂直城市主义要求设计者专注于地面高度的设计，尽管建筑本身向天空伸展。

三个总平面规划案例将诠释一系列设计策略，使以高层建筑为主的重大城市项目最终与周边现存及发展中文脉形成了互惠、滋养、可持续的关系。案例一展现了如何通过高层建筑的规划在孟买中心区边缘115公顷的绿地场地上塑造城市生活。案例二中，在紧邻大阪中心车站50公顷的棕地上，高层建筑可持续地转化了该区域的城市生活。案例三包含了对一座占地17公顷的前纺织厂的改造，示范了一个脆弱的城市格局如何通过高层建筑项目得到强化。

这些总平面规划不仅主体为高层建筑组成，它们在大规模城市建造过程中不断强调了地形、公共空间营造及连通性的主

transformed by tall buildings. The third, involving the redevelopment of a 6.8-hectare former textile mill in central Mumbai, describes a fragile urbanism sensitively *reinforced* by a tall building project.

These master plans not only share the tall building as their fundamental building block, but they demonstrate the recurring relevance of typology, public place-making, and connectivity in city-making at scale. Manipulation and inflection of conventional tall building typology is arguably what makes each of these master plans appropriate for its particular place – climatically, programmatically, and structurally. In turn, considering public place-making as a fundamental goal compels tall building design to be meaningful, animate, and unambiguously local – otherwise there is no there, there. Connectivity – in terms of physical, social, and psychic mobility – is in some sense the aim of all good design and planning; it makes the tall building and its surroundings mutually dependent, reciprocal, and relevant.

Case 1 – FORM: Wadala Vision Plan, Mumbai

In 2011 the Wadala Study Area stood apart among the many areas within the Mumbai Metropolitan Region undergoing or having the potential to undergo rapid transformation.

Wadala's extraordinary attributes included its position as an edge (of the core of Mumbai) and center (of its Metropolitan Region), which presented the opportunity for a new mixed-use development node: its nascent transit and emergent roadway connectivity, which offered convenient access to Mumbai's international airport, the historic core, emerging CBDs, and suburban developments; its important role in the seasonal ebb and flow of water in the city (as undeveloped saltpan land along Mahul Creek); and, maybe foremost, its existence as a contiguous block of hundreds of acres subject to redevelopment, with adjacency to more. Couple all of these qualities with the challenges and opportunities of the Maximum City, and Wadala's future was seen as Mumbai's future. The master plan (Figure 1) examined a 115-hectare greenfield site with an as-of-right capacity of up to 4.5 million square meters of mixed-use development, with an emphasis on the intersection of infrastructure, mobility, ecological thinking, and place-making.

In the context of a master plan simultaneously focused on achieving maximum development density and a significant and memorable public realm, the tall building emerged as primary urban building block. Studies of precedent urban block structures and their essential real estate and programmatic logics in relation to experience and image of place led to an iterative analysis of potential block

题。对传统高层建筑的操作和变化使得这些整体规划与其所处场地在气候、功能和结构上相适应。以公共空间营造为目标的策略使得这些高层建筑的设计充满深意和活力，并获得有毋庸置疑的当地性，反之则割断了与当地文脉的联系。连通性，包括物质的、社会的及心理的机动性，在某种意义上是一切优秀设计规划的目标；它使得高层建筑与周边环境相互依存、互惠、联结。

案例1 – 塑造：Wadala 远景规划，孟买

2011年Wadala科研区因其巨大的城市更新潜力，从大孟买都市圈的众多区域中脱颖而出。Wadala的优势在于其处于孟买核心区的边缘，但同时处于孟买大都市圈的中心。该特征意味着新的混合功能城市节点在该区域建设的巨大潜力；其新近建设的交通运输系统能方便连接孟买国际机场、历史核心区、发展中的CBD以及远郊的建设区；该区域里 Mahul 河旁未开发的盐地，在整个城市季节性的水文变化中至关重要；更重要的是它绵延上百公顷待开发的土地资源，连接着更多的开发区域。兼有上述的潜力和挑战，Wadala的未来亦可被视为孟买城市的未来。总平面图（图1）显示了将450万平米的混合功能规划放入115公顷的绿地场地里，强调了基础设施、机动性、生态保护及场所营造之间的交互关系。

整体规划兼顾了对最大限度开发密度的追求和高质量公共空间的营造，将高层建筑作为主要的城市网格区块单元。基于对经典城市区块结构，及其内在的地产功能逻辑与场所意向之间联系的研究，我们对Wadala项目的区块结构进行了互动式的分析。该分析尤其关注了当地现存的办公、居住建筑原型，试图创造出以促进公共空间、强化邻里、惠及社区的建筑形式组合，从而在不同尺度、配置上构建公共和私人的开放空间。

基于上述研究，方案最终采用了225m x 170m的基本区块结构（图2）。该结构能够包含不同的居住和/或办公高层，同时塑造一系列尺度适宜的街道、庭院、公园、小径、广场、运动场及花园——城市生活的公共和私人场所及空间。每一个典型的区块包含一个四层连续的停车裙楼，两个办公高层或最多六座居住高层。高层处于区块边缘，高40–70层，针对功能需求和区位设置；一对100层以上的标志性塔楼及文化设施被设计在特殊的区块里正对Wadala广场——项目的大型中央公园（图3）。在Wadala总图中，停车楼——亚洲当代城市建设中无处不在的有碍城市活动的基础设施——被设计为促进公共区域活动的形式。商业和社区功能紧邻主次街道排列，裙楼的形式在建筑入口处被塑造成公共与私人空间的过渡——在办公入口设



Figure 1. An aerial view of the Wadala Vision Plan (Source: Pei Cobb Freed & Partners)
图1. Wadala规划愿景——鸟瞰视角（来源：Pei Cobb Freed & Partners）

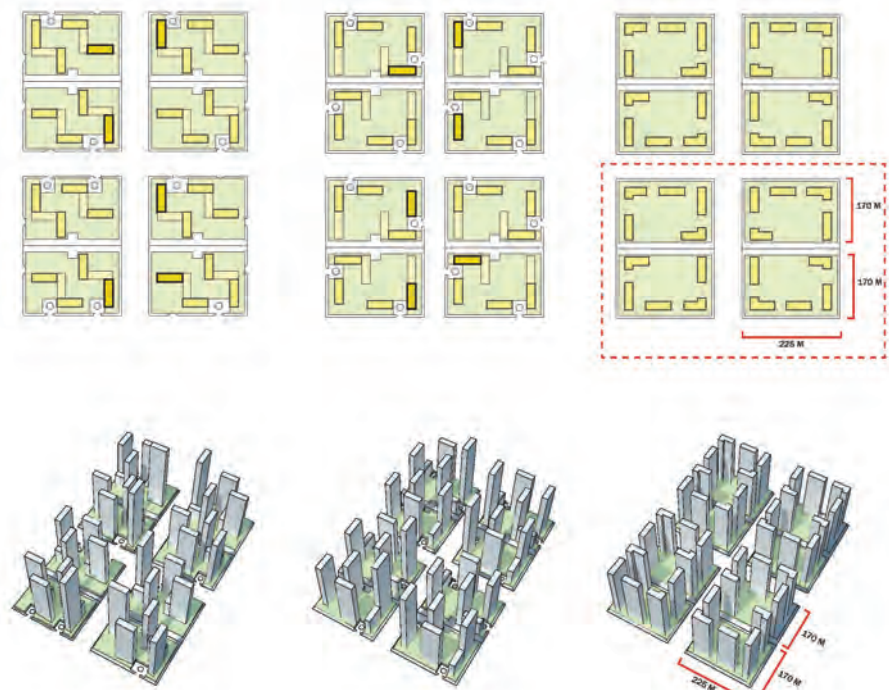


Figure 2. Block typology studies of the Wadala Vision Plan (Source: Pei Cobb Freed & Partners)

图2. Wadala规划愿景——街区类型学研究 (来源: Pei Cobb Freed & Partners)



Figure 3. An overall view of the Wadala Vision Plan (Source: Pei Cobb Freed & Partners)

图3. Wadala规划愿景——总体效果图 (来源: Pei Cobb Freed & Partners)

structures for Wadala, with close attention to existing local office and residential building typologies and the potential for building forms and combinations to promote a public realm, reinforce neighborhoods, foster community, and frame public and private open spaces of various scales and configurations.

The prototypical 225-meter by 170-meter block structure (Figure 2) that materialized from this process is characterized by its ability to host an assorted matrix of tall residential and/or office buildings which in turn shape a range of well-scaled boulevards, streets, courts, parks, paths, plazas, playgrounds, and gardens – the public and private places and spaces of urban life. Each typical block comprises a continuous four-story parking podium and two office towers or up to six residential towers, located near the block perimeter and rising 40 to 70 stories, depending on use and location; a pair

of 100-story plus iconic towers and cultural facilities occupy special blocks fronting Wadala Maidan – the development's large, central park (Figure 3). In the Wadala master plan, the parking podium, an ubiquitous anti-urban foundation of all too much contemporary development in Asia, is configured to promote a vigorous and active public realm, with retail and community uses lining the central boulevard and side streets. The podium form is inflected at building entrances to offer a threshold between the public and private realms with shaded plazas (at office buildings) and carefully proportioned entry courts (at residential buildings). The podium breaks every other block at access points to the large network of linear neighborhood public parks. Above the podium, towers are arranged within each block to optimize access to natural light and to form generous podium-

置了庇荫的广场，在居住入口则设置精致的入口庭院。每隔一个区块裙楼就会断开从而形成进入连续公共公园系统的入口。裙楼之上，每个区块内的塔楼被设置在能最大限度获得自然光照的位置，并形成广大的裙楼顶部私人花园（图4）。如此，高层建筑项目最核心的三种集体体验，即天际线、裙楼屋顶、地面全都得到了最优化。最终以高层建筑为主体形成的独特城市格局，有力地说明了高开发密度与高质量的多样的及趣味的公共开放空间，不仅可以共存，更能够相互促进。

案例2—转化：大阪车站公园，大阪

经典的内部空间元素之间往往存在着本质的、密切的、独特的关系，这种关系存在于建筑和景观之间、标准网格和标志性建筑之间、普通与重要空间之间以及公共与私人领域之间。这些场所进一步因他们独特的建筑、功能、使用模式、建筑原型而杰出。大阪车站公园项目场地位于大阪中心车站旁155公顷的废弃站场，其可观的面积及重要的地理位置提供了实现多重愿景的可能——创造大阪最大的绿色公共开放空间；将该绿色空间完全融入当地文脉；为进一步大规模混合功能开发提供一个模式，该模式充分尊重并强化现存的城市网格；充分利用针对交通枢纽改造的巨大基础设施投入，为大阪塑造一个标志性的令人赞叹的迎宾窗口。

为了实现上述目标，方案的整体规划提出将场站制造的巨大城市空地转化为一个整体联通的都市公园。该方案提出的高层建筑网格提供了未来大规模建设的可能性，同时弥合了被三角形场地隔离的东西两侧的城市网格（图5）。方案基本结构中散布着四座点状塔楼，可用于居住或酒店功能；场地西侧另有九座指状相互连接的中等高度建筑，适用于居住和小型办公的混合功能；场地西侧不同高度建筑和平面原型的混合制造了不规则片段式的街道边缘，及一系列精彩多样的邻里尺度空间，与西侧现有的空间相调和（图6）。场地西南角紧邻车站和大阪中心办公商业区，一个大型办公建筑可容纳200平方英尺的办公空间而不对公园空间产生影响。公园空间利用其表面变化的人造地景，遮盖住位于地下的交通及商业通道，同时制造了一个地上地下的步行网络，为西侧邻里尺度空间与东侧大型建筑尺度空间提供过渡。

本方案中高层及中层建筑巧妙结合，并与自然景观相融合，实现超预期开发密度的同时，塑造了城市尺度的绿地空间，并将原本隔离的两个区域重新连接。本方案示范了一个以高层建筑为主体的城市空地开发项目如何将两个被分隔的、异质的区域重新联结及强化。

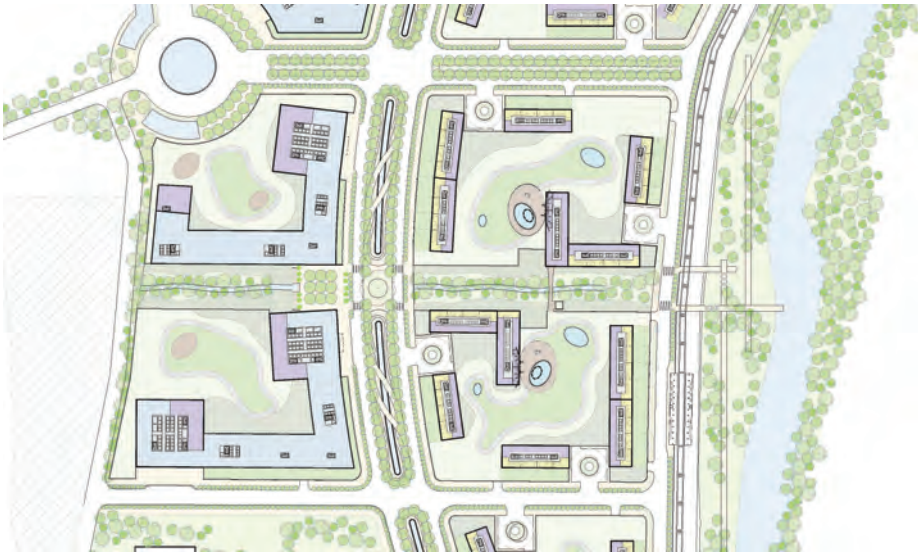


Figure 4. Wadala Vision Plan's typical podium block (Source: Pei Cobb Freed & Partners)

图4. Wadala规划愿景——典型一层总平面图（来源：Pei Cobb Freed & Partners）



Figure 5. An aerial view of the Osaka Station Park (Source: Pei Cobb Freed & Partners)

图5. 大阪车站公园——鸟瞰（来源：Pei Cobb Freed & Partners）

top private landscapes (Figure 4). As such, the three essential collective experiences of a tall building development – skyline, podium-top, and ground – are optimized and calibrated. The resulting unique urbanism, principally formed from whole cloth by tall buildings, provides a powerful demonstration that substantial development density and a civic realm with significant open space, with variety and interest, can not only be compatible, but mutually reinforcing.

Case 2 – TRANSFORM: Osaka Station Park, Osaka

Memorable urban places in the world are characterized by essential, inimitable, and distinct relationships: between building and landscape; between normative fabric

and iconic buildings; between ordinary and exceptional spaces; or between public and private realms. These places are further distinguished by their particular architectures, programs, patterns of use, and building typologies. Because of its immense size and key location, the opportunities for Osaka in envisioning a new future for the 20-hectare decommissioned rail yard adjacent to its central train station, were manifold: to create the largest and most memorable open green space possible; to thoroughly integrate that green space with its context; to provide a format for a significant new mixed-use development, which is both sympathetic to and reinforcing of existing fabric; and to leverage the significant infrastructure investment associated with submerging, realigning, and re-envisioning a major transit hub to create a spectacular and iconic arrival point for Osaka.

案例3–强化: Shrinivas 纺织厂整体规划/ World Towers, 孟买

在多数世界城市中，大型、连续且处于城市中心的待开发场地是异常罕见的。在孟买，废弃的纺织厂场地，加上对居住和混合使用空间的巨量需求，使得占地巨大、单次开发面积达百万平方英尺的项目成为可能。但是，城市周边区域大量的停车需求、复杂的社会问题、不规则的场地形态、私有化倾向、不断变化的法规、发展方式的不确定性、不清晰的规划共同导致这些场地巨大的发展潜力一直未能实现。

纺织厂占据了孟买中心区24个以上10–20公顷的场地，它们中的大部分在1980年中期就停止了运行。大量纺织厂工人及家庭仍居住在周边的社区里；有些则一直住在纺织厂所在场地里。在上锁的大门后面，居住和商业生活在这些闲置场地中继续进化，有的甚至延续了近20年。当2000年中期政治和管理机制终于使得这些旧纺织厂的地产开发成为可能时，这些场地已经进化出了自己的地方特征，其城市网格和生活与纺织厂既紧密相关又相对独立。早期对类似场地的开发，有时是单次20公顷百万平方英尺的开发项目，往往缺乏规划及对周边环境复杂度的认知。

Shrinivas纺织厂的改造规划正是在这样复杂的背景下于2009年展开的。它位于孟买中心区，占地17公顷。开发需要实现4百万平方英尺的混合功能开发及近3百万平方英尺的停车及服务空间，我们很清楚这需要至少3座超高塔楼和一个巨大的停车裙楼。更为清楚的是，方案需要对场地文脉做出明确的回应。

因此，在改造规划伊始我们就非常明确：不能将这个处在世界人口最密集的城市中心的场地变为一座孤岛。规划秉承的信念是将规划延伸到场地红线之外的城市中不仅仅是有利的，更是符合城市改造的根本原则的：通过场地内新建公共设施和空间将周边城市生活吸引到场地内，同时让新区的活力通过连接性的建立渗透周边的社区。

最初的规划基于两个针对场地文脉和连接性的重要观察。首先，通过Shrinivas纺织厂的东边缘可进入两条现存的公共街道，而非多数情况下的死胡同。第二，场地在这两条街上有限的沿街界面长度足以被设计为优秀的场所，但不足以创造令人印象深刻的场所。基于这些现实情况，同时考虑到场地巨大的面积及不规则的形状，设计的基本策略是将Shrinivas街延伸贯穿整个场地，从而提供与现存路网的连接。这是一条私人维护的公共通路。同样重要的是，这条弧形的街道能够创造令人印象深刻的场景，提升场地的地产价值，即便场地偏远的角落也能被惠及。就如同超高层建筑将塑造孟买的天际线，Shrinivas街将成为新社区的标志，创

In order to realize all of these varied opportunities, the master plan proposed to transform the giant urban void of the rail yards into an integrated and connected metropolitan-scale park, whose new tall building fabric simultaneously became the key to accommodating significant new development and mediating between widely disparate building fabrics and uses east and west of the large triangular site (Figure 5). The master plan's essential framework interspersed four point towers, suitable for residential or hotel use, with nine interconnected finger-like mid-rise buildings, suitable for a mix of residential and small-scale office uses, along the site's western edge. The mix of heights and plan typologies form an irregular and episodic street edge, creating a series of unexpected and varied neighborhood-scale spaces compatible with the existing neighborhood to the west (Figure 6). A single large office tower at the southwest corner of the site, closest to the train station and Osaka's central office and commercial district, accommodated two million square feet (185,800 square meters) of office space with minimal physical impact on the park. The park itself, with its changing artificial topography, conceals underground transit uses and retail corridors while comprising a network of below and above-grade pedestrian paths, relating the finer scale neighborhood to the west with the large-scale development to the east.

In this master plan, tall buildings, carefully intermingled with mid-rise buildings and closely integrated with a naturalistic landscape, accommodate more than the anticipated density of new development and guarantee a park of metropolitan proportions, which nonetheless joins two disparate and previously disconnected districts. It offers a model in which a major tall building development, inserted into a void, creates essential connective urban tissue that ties together two existing and divergent neighborhoods – reinforcing both.

Case 3 – REINFORCE: Shrinivas Mills Master Plan / World Towers, Mumbai

In most world cities, a large, contiguous, and centrally located site available for redevelopment would be virtually unheard of. In Mumbai, the existence of the vacant mill sites, coupled with tremendous demand for new housing and mixed-use space, makes projects that dispose of many acres (or hectares) and millions of square feet (or thousands of square meters) at a time almost commonplace; yet, immense parking



Figure 6. Osaka Station Park from the street (Source: Pei Cobb Freed & Partners)
图6 大阪车站公园——街景 (来源: Pei Cobb Freed & Partners)

requirements, complex social issues, irregular site configurations, a tendency towards privatization, changing regulations, a fluid approach to development, and circumstantial planning typically conspire to render the great potential of these sites, especially as they relate to the city around them, unrealized.

Most of Mumbai's textile mills – occupying more than two dozen 10- to 20-acre (four- to eight-hectare) sites in central Mumbai – ceased operation in the mid-1980s. Many of the mill workers and their families remained housed in the local neighborhoods, and some continued to be housed on the mill sites themselves. Residential and commercial life continued to take place and evolve around these idle parcels, many existing for more than twenty years, more or less behind locked gates. By the time political and regulatory mechanisms allowing real estate development of the mills came about in the mid 2000s, the area had evolved a particular identity, fabric, and urbanism both intimately related to and independent of the mills. The earliest mill redevelopments, sometimes 20 acres (eight hectares) and many millions of square feet (thousands of square meters) at a time, tended to proceed with limited planning and less acknowledgement of the complexity and value of the surrounding context.

造独特的场所感——这里的生活和工作与城市紧密连接 (图7)。

项目另一亮点在于街道南端两侧分布的线性公园。它占地2公顷，由私人维护向公众开放。公园带来大量绿色空间，步道、长椅、水景等公共设施遍布其中；街道北端两侧则密布商店和餐饮。这一整体设计中的公共元素比重是在孟买城当代建设中从未见过的 (图8)。

街道北端的商业餐饮为停车服务裙楼提供了充满生气的临街界面。停车服务裙楼高6层，面积3百万平方英尺，是整个项目第二重要的元素。裙楼顶部则设置了私人的开放空间，沿街的装饰带，通向私人公寓落客点及入口庭院的宽阔通道，同时亦成为三座超高层塔楼的基座。裙楼并不是独立的，而是被视作塔楼的延伸。塔楼则是项目第三重要的元素。除了提供停车服务功能，裙楼更将塔楼相互联系，塑造地面空间。当裙楼围绕的弧形Shriniva街与主通路相连时，它更控制了从公共空间向私人空间过渡的序列。在通路内，裙楼和塔楼的三叶草形平面相融合，围绕圆形入口庭院旋转 (图9)。三座公寓塔楼，包括115层的孟买最高楼以及另两座分别85层及65层的高楼，以极具活力的姿态和天地相接。同时，它们与裙楼的关系确保了与新生公共空间的舒适共融。规划中另一座尚未设计的塔楼高40-50层，将邻近

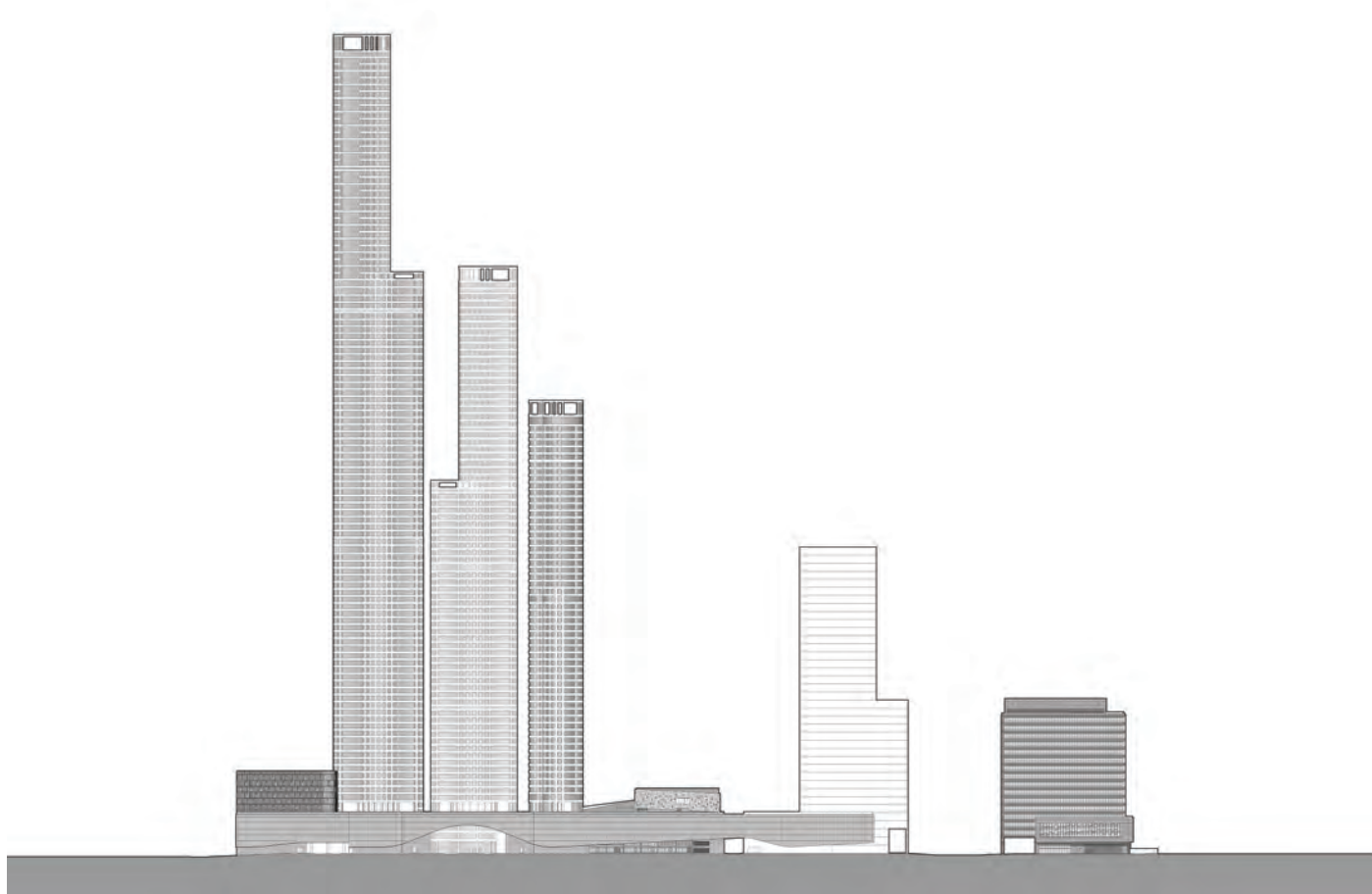


Figure 7. Composite elevation of Shrinivas Mills Master Plan / World Towers (Source: Pei Cobb Freed & Partners)
图7: Shrinivas Mills的总体规划/世界塔的组合立面图 (来源: Pei Cobb Freed & Partners)

It is within this complex background that the master planning process of the Shrinivas Mills site – a 17-acre (6.8-hectare) former textile mill in Central Mumbai – began in 2009. It was clear from the outset that a challenging program, calling for close to four million square feet (372,000 square meters) of mixed-use development and close to three million square feet (279,000 square meters) of parking and services, would require at least three very tall towers and an extensive parking podium. It was even clearer, however, that a definitive response to context was in order.

As such, the master plan for Shrinivas Mills began with the proposition that such a significant site in the middle of the world's most populous city cannot be an island unto itself. It proceeded with the conviction that reaching out to the city beyond a site's property line is not just a good thing to do, but a fundamental principle of urban development: drawing the life of the city into the site by offering amenities and public space is as important as letting the energy of the new development spill back into the surrounding neighborhood by providing connectivity.

The master plan process launched with two essential observations related to context and connectivity. First, Shrinivas Mills was one of

very few mills sites with access (on its eastern and western edges) to two existing public streets (it was not a cul-de-sac). Second, its limited frontage on both streets was enough to make it an excellent location, but not enough to make it a memorable place. Given these facts, together with the site's large size and its irregular configuration, the project's fundamental planning strategy extended a privately maintained public thoroughfare – dubbed Shrinivas Lane – through the site, providing connectivity to existing roads and access throughout the site. Equally important, largely through its arced form, the lane would provide an imageable address where there previously was none, enhancing real estate value of even the most remote reaches of the site. As much as the very tall buildings that would eventually mark Mumbai's skyline, Shrinivas Lane would become the living iconic identity of a new neighborhood, engendering above all else a sense of place; to live or work at Shrinivas Mills would be to lead a life connected to the city (Figure 7).

As the project's essential feature, the lane is flanked on its south by a two-acre (0.8-hectare) privately maintained, publicly accessible linear park, bringing much needed green space and amenity in the form of walkways, benches, water features, and other elements. The north side of the

裙楼的东南侧边缘, 在这里Shriniva街与Sanapati Bapat Marg相遇, 在场地东侧形成标志性的通路。公寓塔楼的设置都从裙楼的公共界面后退若干距离以确保私密性, 而通路入口处的塔楼与裙楼连接的形式则不同——只有当人们进入场地内部才能看到裙楼的边缘。

孟买是一座充满极致与反差, 希望与能量的城市。没有一座城市比孟买更适于这样的整体规划方案。在这里适度的空间和资源分配即能塑造良好的场所感, 将社区改造得饱含魅力, 进而让居住和办公空间富有吸引力。

结论

亚洲地区公共和私人的大型场地开发通常包含三个核心元素: 高密度、高层、大量的停车需求。最通常的回应, 即巨型的停车楼加美观的塔楼, 习惯性地忽视了现存的场地文脉, 因而无法为城市主义提供新的典范。围绕此类大型开发项目一般会涉及的核心问题: (相对) 尺度、连接性、原型以及公共空间与建筑路网 (自身的或与现存格网的关系), 本文引用的项目概括性地阐述了应对这些问题的方式, 以及如何在设计规划高层建筑时利用其独特的机遇和可能性。

lane is lined with shops and cafés. The ensemble represents an act of civic design unprecedented in contemporary Mumbai (Figure 8).

The shops and cafés north of the lane provide an active, animated front to the site's second main element – a six-story, three-million-square-foot (279,000-square-meter) parking and service podium. The podium, in turn, provides private open space (at its roof), a comfortable cornice line along the lane, a grand gateway to a private residential vehicular drop-off and entry court, and a place for three tall residential towers to land. Significantly, the podium, as opposed to being a neutral base, is seen very much as a compositional extension of the towers themselves, the project's third essential component. As essential as the podium is to accommodating its functional parking and service program, it is also essential to relating the towers to one another, shaping space at ground, and modulating the sequence from public to private realms as the podium's concave Shrinivas Lane arc converges on a grand gateway. Inside the gateway, podium and towers join together with the towers' trefoil geometry pinwheeling around a circular entry court (Figure 9). The group of three residential towers – including Mumbai's tallest building at 115 stories, and two of its taller buildings at 85 and 65 stories, respectively – has been conceived to be as dynamic and interesting as it meets the ground as it will be on the skyline. At the same time, their relationship with the podium ensures a comfortable relationship with a new public space. A fourth tower, anticipated to rise 40 to 50 stories and yet to be designed, is intended to engage the southern and eastern edges of the podium as Shrinivas Lane meets Sanapati Bapat Marg to form an iconic gateway at the site's eastern edge. Whereas the residential towers are set back from the public face of the podium to create privacy, the gateway tower's engagement of the podium will allow the tower's form to take precedence—revealing the podium's cornice only as one travels into the site.

There is no better place than Mumbai – a city of extremes and contrasts, aspirations and energy – to propose a master plan whose residences and workplaces will be made more attractive by virtue of the fact that a modest allocation of space and investment surrounding them might create a sense of place, and make their neighborhood a desirable place to be; and, with its density and rapid development, there is no better



Figure 8. Shrinivas Mills Master Plan / World Towers from Shrinivas Lane (Source: Pei Cobb Freed & Partners)
图8. Shrinivas Mills 总体规划/世界塔——Shrinivas巷的街景 (来源: Pei Cobb Freed & Partners)



Figure 9. Shrinivas Mills Master Plan / World Towers from the entry court (Source: Pei Cobb Freed & Partners)
图9. Shrinivas Mills 总体规划/世界塔——入口庭院视图 (来源: Pei Cobb Freed & Partners)

place to demonstrate the ability of the tall building to successfully shape civic space.

Conclusion

Public and private development proposals for large sites across Asia continue to arrive at architects' and planners' doorsteps with three essential components: high-density, high-rise, and lots of parking. The most common response – giant podiums with shapely

towers – habitually ignores existing context and has mostly failed to offer compelling new paradigms of urbanism. Conceived with a conviction that the central issues of this sort of large-scale development include (relative) scale, connectivity, typology, and the relationship between open space and building fabric (on its own or in relation to pre-existing fabric), the projects described in this paper offer a window into how these issues can be addressed in general, and how tall buildings in particular introduce their own unique opportunities and possibilities.