



INNOVATIVE ENGINEERING AWARD (DESIGN)

TO-BE-BUILT HOUSING

# UrbanVille @ Woodlands

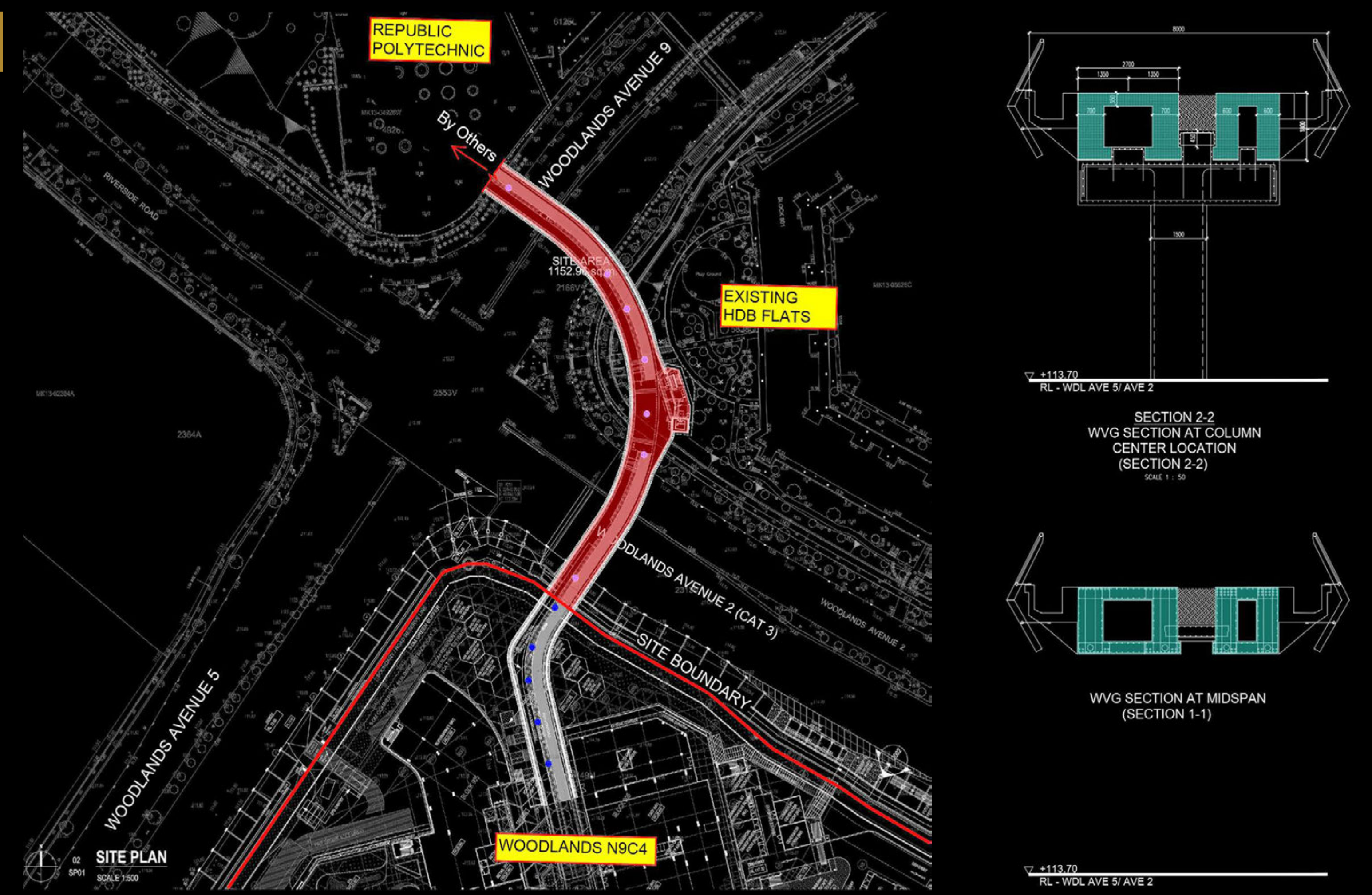
## Project Overview

UrbanVille @ Woodlands comprises 8 residential blocks of 14 to 32 storeys, with a total of 1,785 units. It is integrated with a multi-storey car park (MSCP), social communal facilities and commercial facilities.

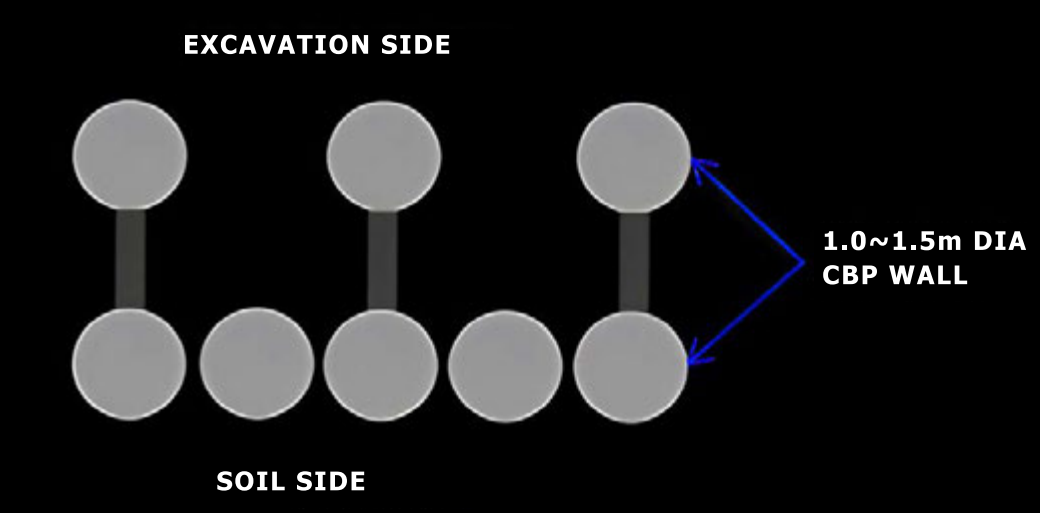
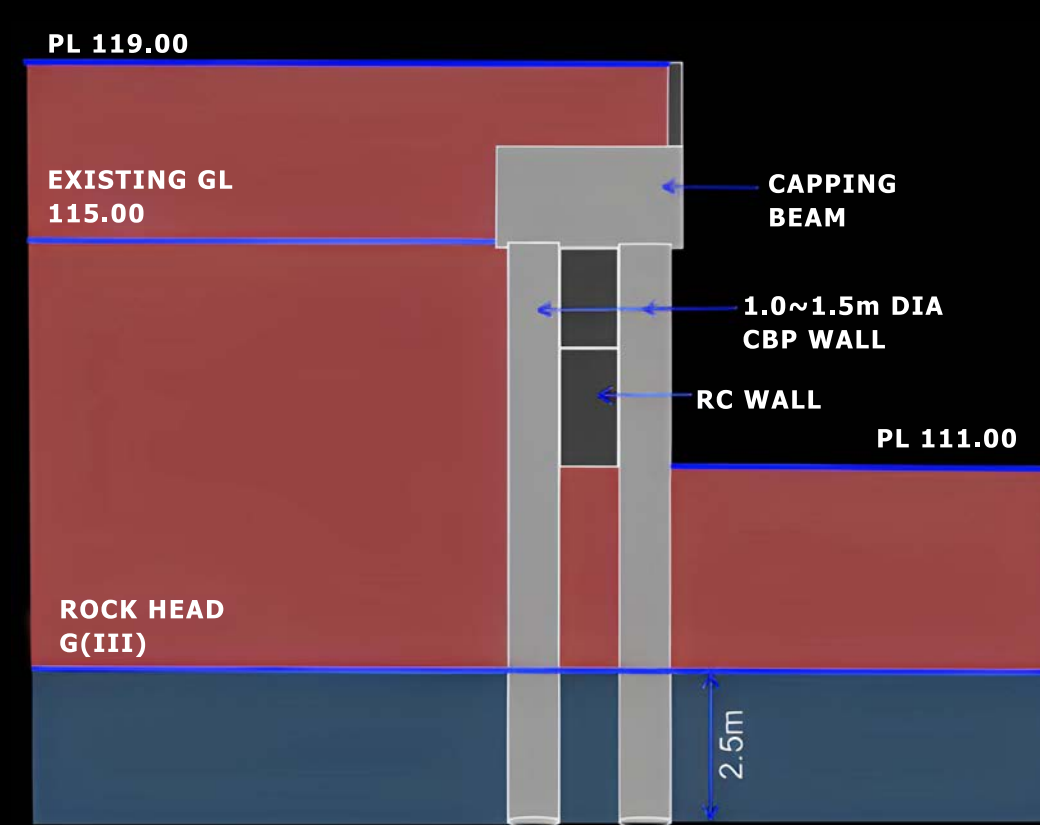
## Project Achievements

A 22 metre-long iconic sky bridge connecting the pair of 32-storey residential towers at the 24<sup>th</sup> storey provides a unique view across the horizon. The adoption of precast concrete technology in the construction of the sky bridge will increase buildability and construction productivity, as well as enhance safety at the construction site. The process also involves complex modelling with numerous loading possibilities and several intricacies in structural analysis, such as wind directions and tower behaviours, which was necessary to ensure the sturdiness and long-term serviceability of the sky bridge.

To form a robust earth-retaining system without conventional intermittent soft piles, reinforced concrete stitching walls were proposed to integrate the Contiguous Bored Pile (CBP) buttress piles. This environmentally sustainable design is cost-effective and time-saving as there is a significant reduction in concrete usage and the number of piles required. Besides meeting the structural and geotechnical design requirements, the buttress system also contributed to the overall landscaping strategy for the development, creating an aesthetically pleasing 'Eco-Valley' between the residential towers and the MSCP, which offers residents a space to rest and relax.



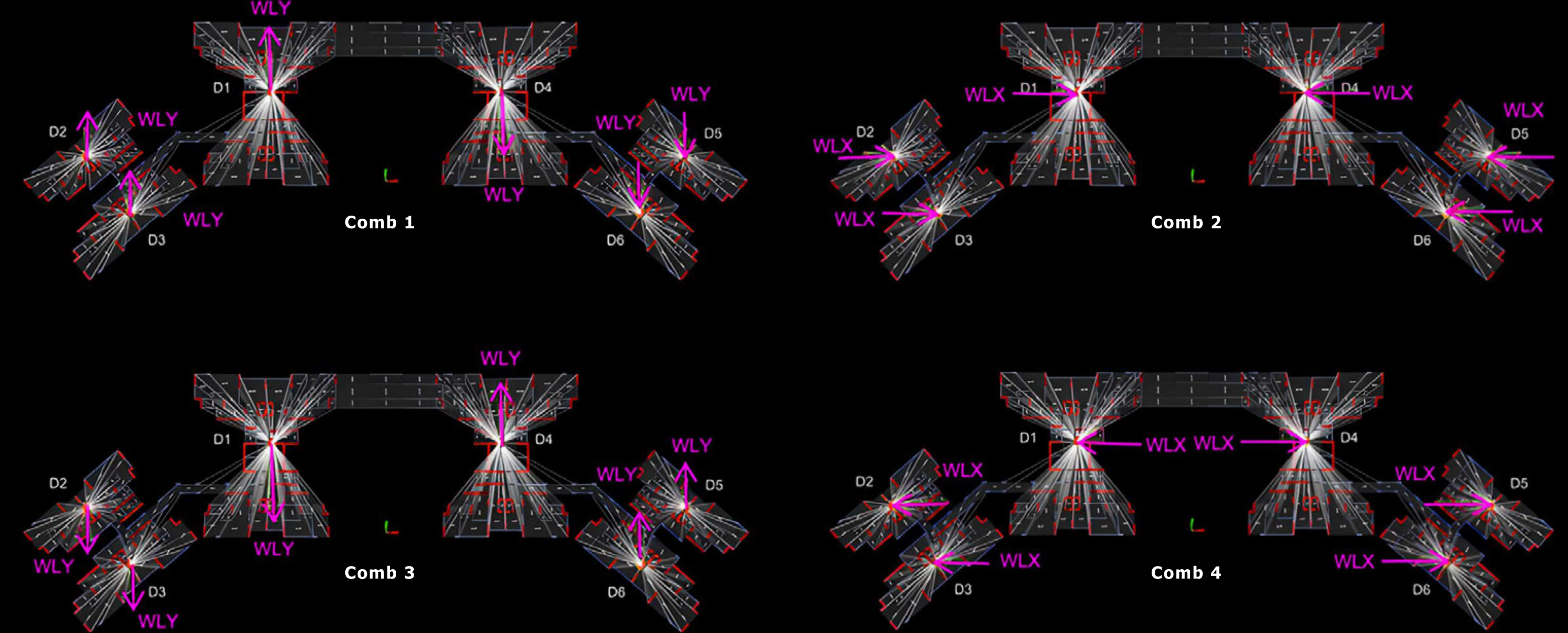
WoodsVista Gallery crossing Woodlands Avenue 2 and Woodlands Avenue 9



L27-L32 (TYP)  
SKY BRIDGE  
L1-L24 (TYP)



Level 24 sky bridge between block 908B and 909C



Sky bridge - Analysis Model



Contiguous Bored Pile wall between residential towers and MSCP