

# 31 WHEAT ROAD SOLAR ACCESS REPORT\_



Revision  
FOR APPROVAL

Date  
19 JULY 2013

Client  
GROCON

Project Name  
REDEVELOPMENT OF  
31 WHEAT ROAD, SYDNEY

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01\_

Impact summary

Shadow impact has been a guiding factor in the design of the proposal since its inception. The design team have clearly understood the importance of the site's surrounding public realm and its access to daylight in particular within the extensive green areas to the south of the proposed development site.

As explained in the urban design report, the eastern and western facades and roof emulate a ribbon-like form taking cues from the surrounding roads and creating the building's unique form. The ribbon form has been manipulated in response to site analysis.

As Fig 1 illustrates, the western portion of the building is lowered to allow maximum winter sun access to the Children's Park beyond. In addition to the height adjustments, set-out of the building was tested to further reduce shadow impact. From an early position, the building moved 11m east to become significantly narrower to minimise shadow impact.

The surrounding green areas are comprised of 4 main areas totalling approximately 19,000m<sup>2</sup>

Tumbalong Park	8,300m <sup>2</sup>
Children's Park	4,730m <sup>2</sup>
Exhibition Green	3,680m <sup>2</sup>
Village Green	2,210m <sup>2</sup>

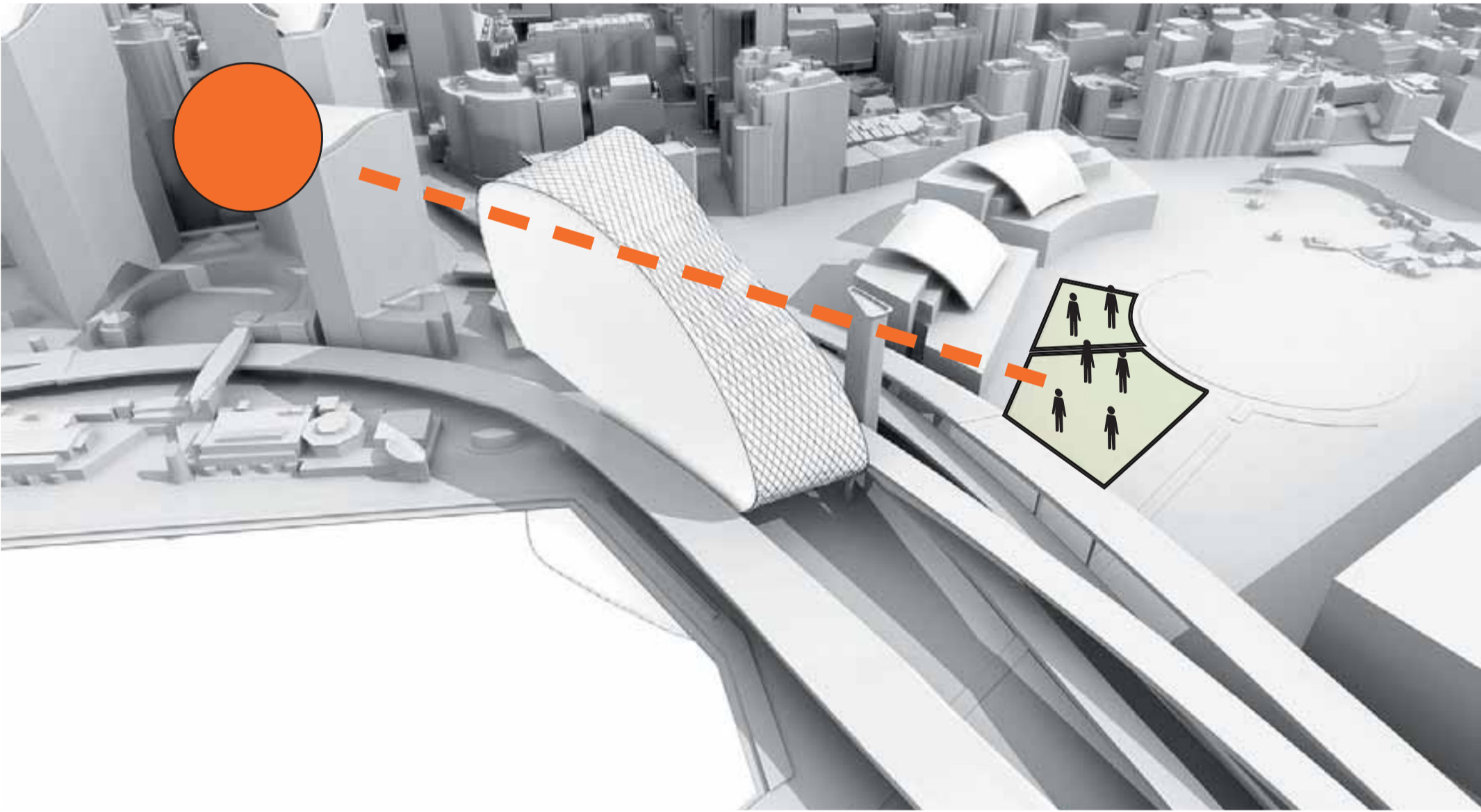
The only green space impacted by the proposal is the Children's Park.

The recently completed Children's Park is a huge attraction to the precinct and significant time and effort has been dedicated to reducing this impact. Numerous meetings and detailed consultation have occurred between the design team, NSW Department of Planning and Infrastructure and SHFA to address this particular issue as existing shadow to the Children's Park is significant due to the surrounding roads and buildings.

On the Winter Solstice between 11am and 2pm the area of existing shadow (as a percentage of the Children's Park) ranges between 38% - 53% Additional to this our proposal ranges between 11% - 0%.

The shadow diagrams in this report illustrate the existing shadow of the current IMAX building (red area) and proposed shadow (blue area) on the winter solstice, 21st June, at half hour intervals between 11am and 2pm.

Also provided are shadow diagrams for the 21st March, 21st September and 21st December which all demonstrate no additional shadow impacts the surrounding precinct.



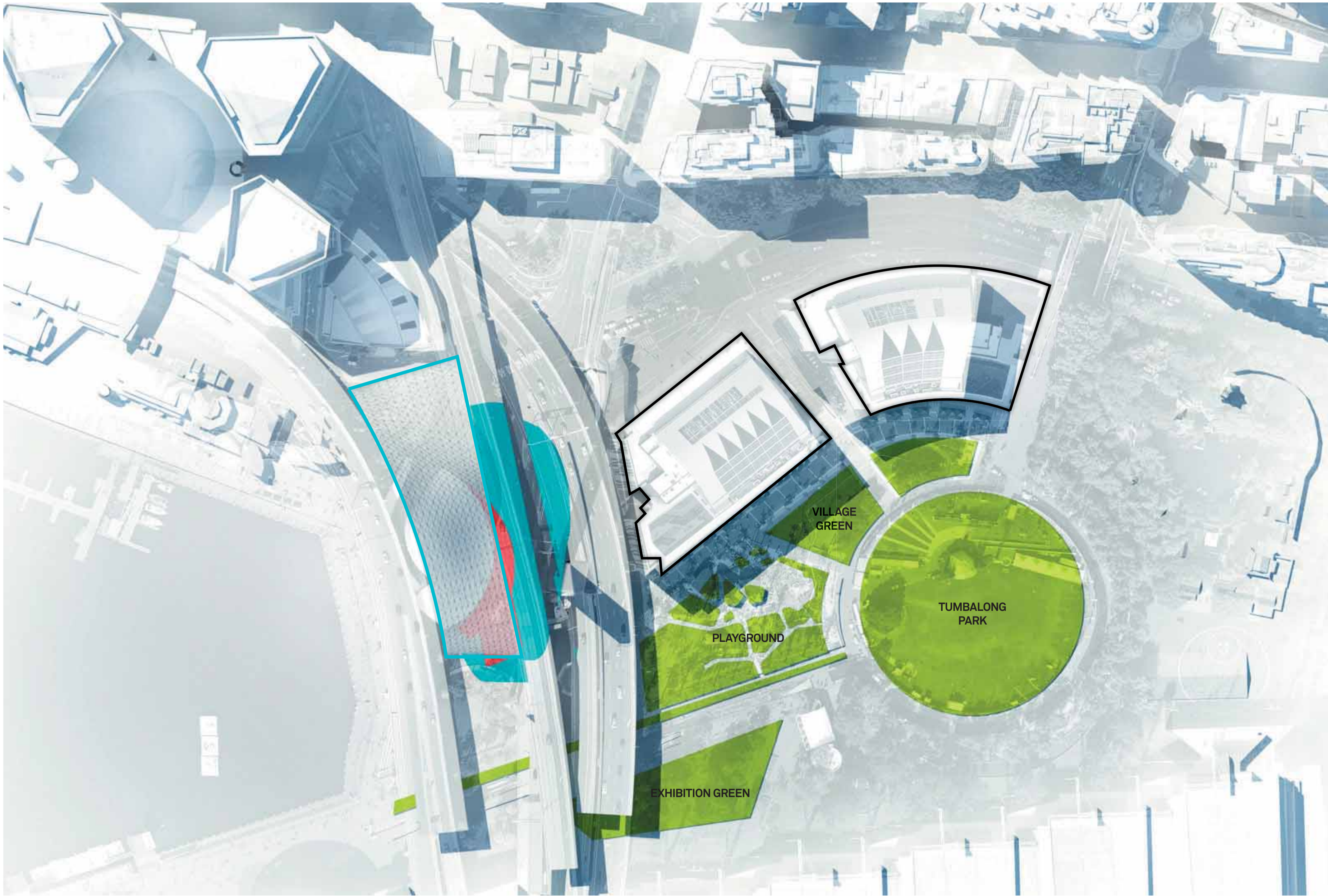
The final Ribbon form minimises shadow impact

FIGURE 1

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EXISTING SHADOW

PROPOSAL SHADOW

MARCH 21 1100\_

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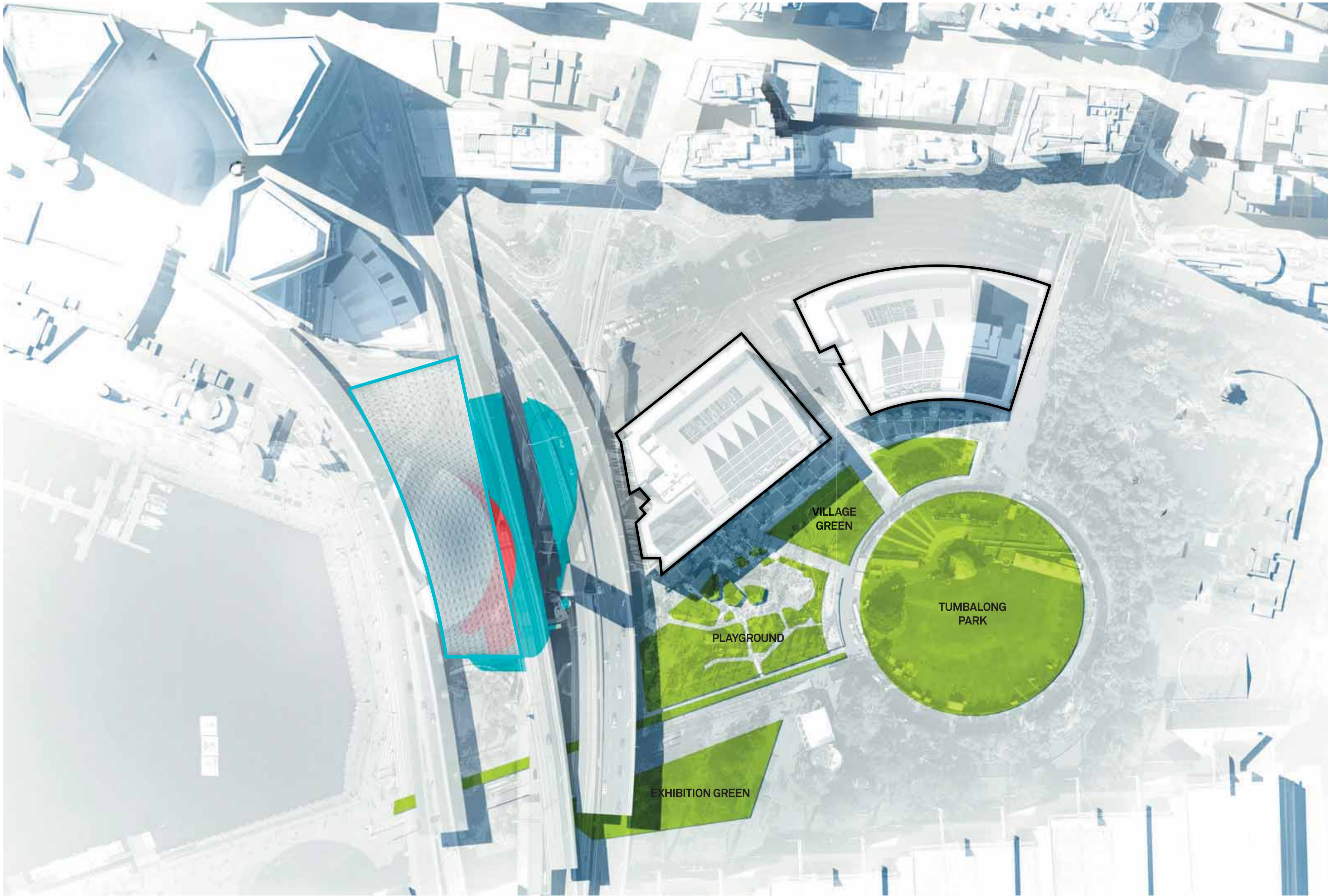
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EXISTING SHADOW

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MARCH 21 1130\_

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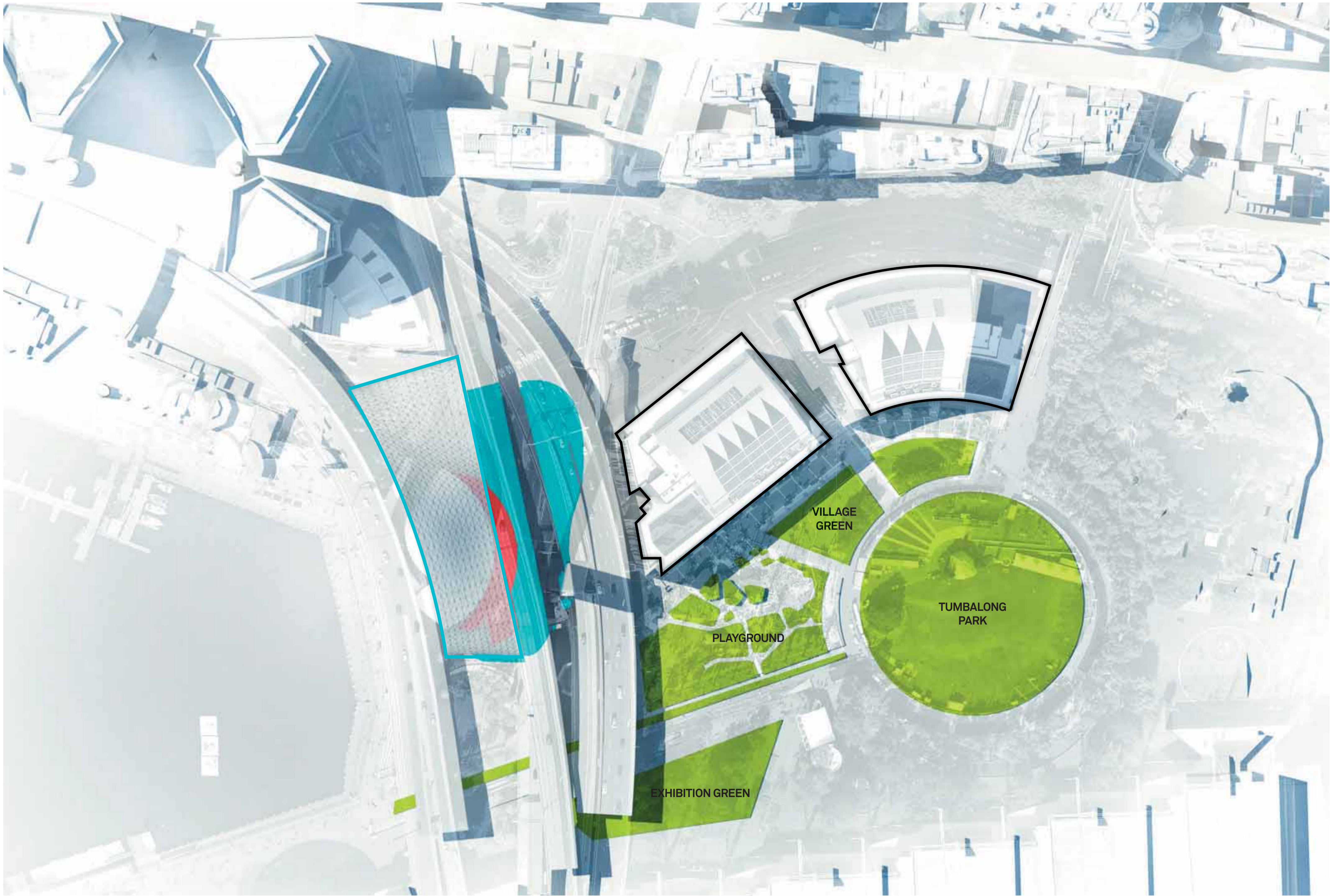
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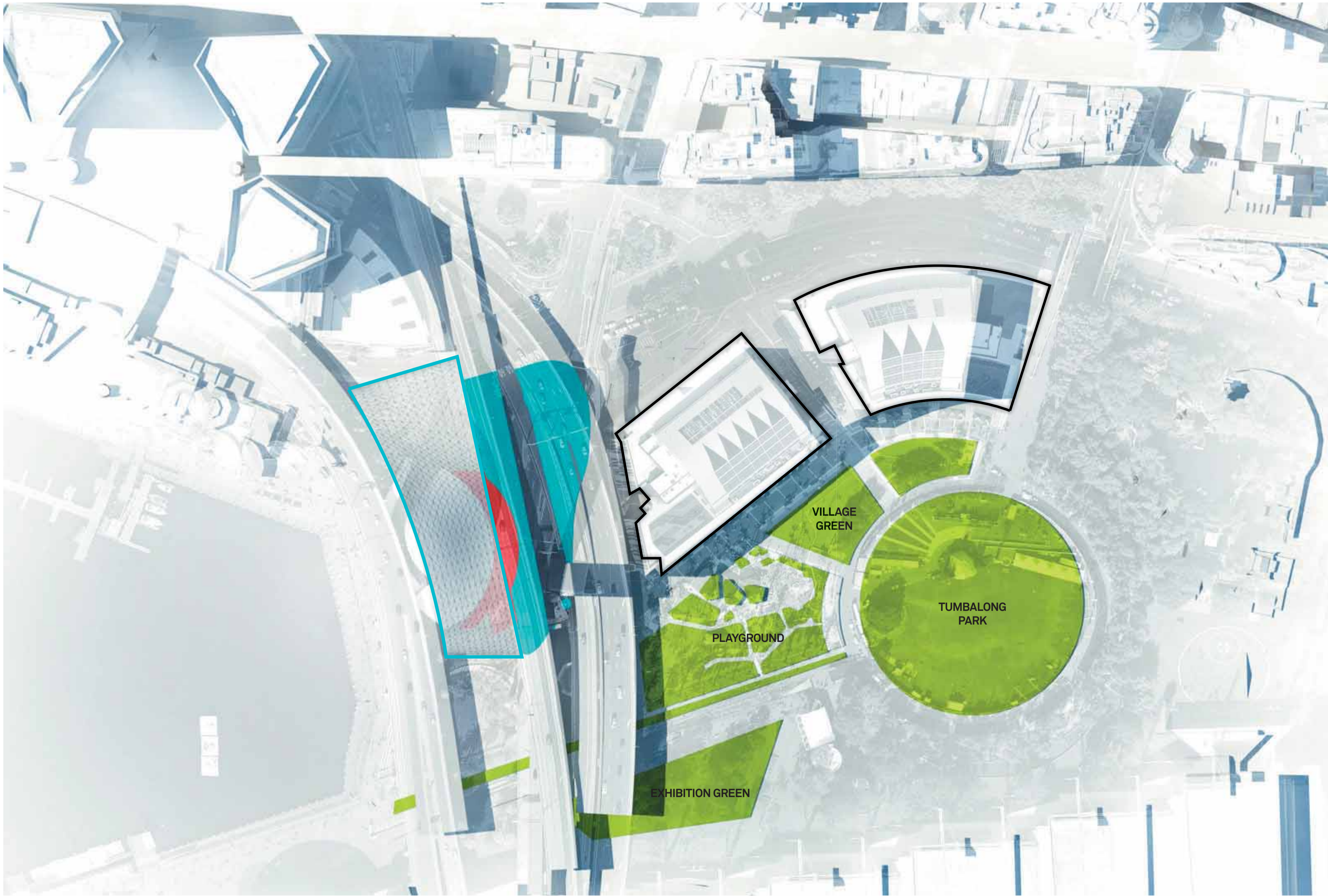
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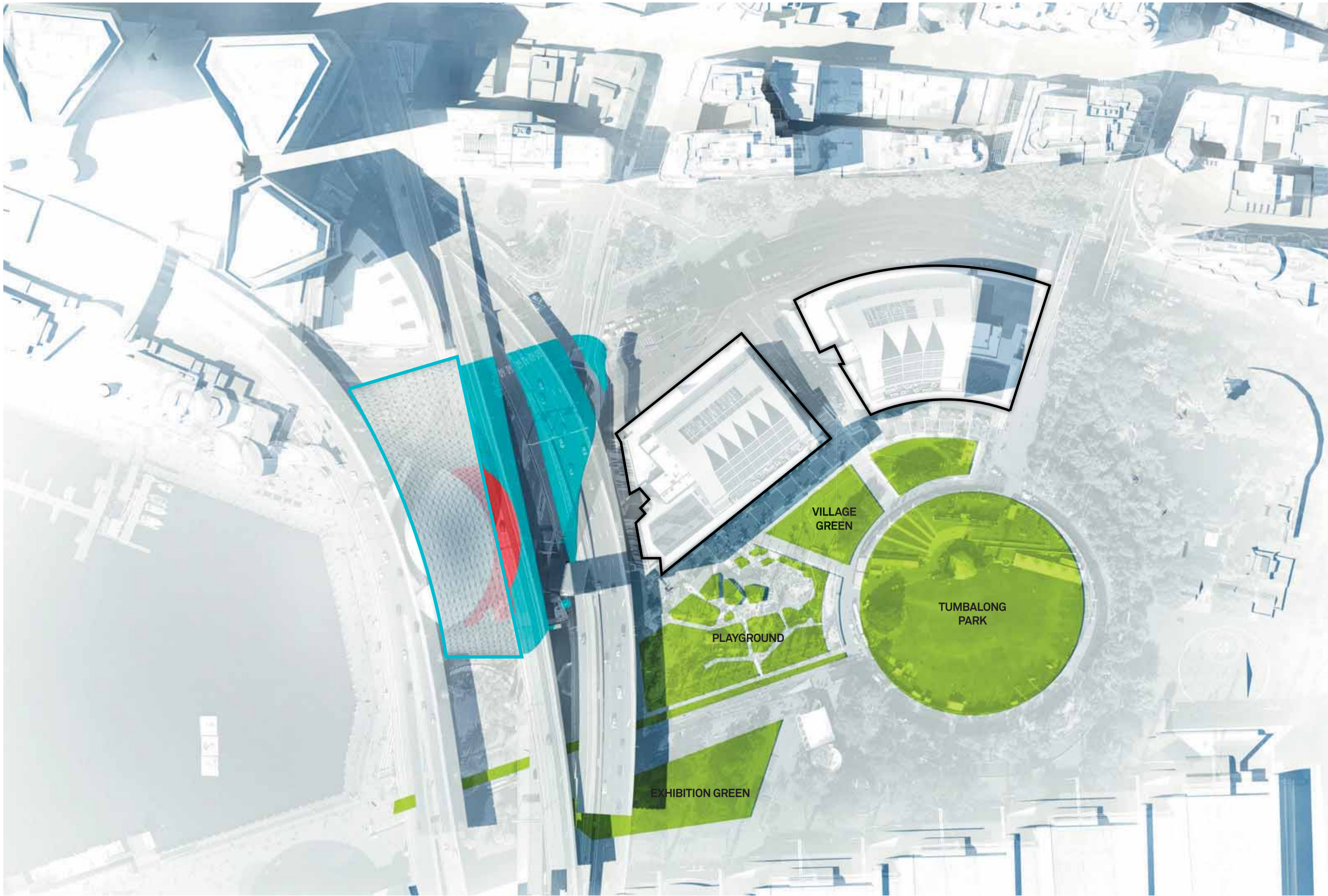
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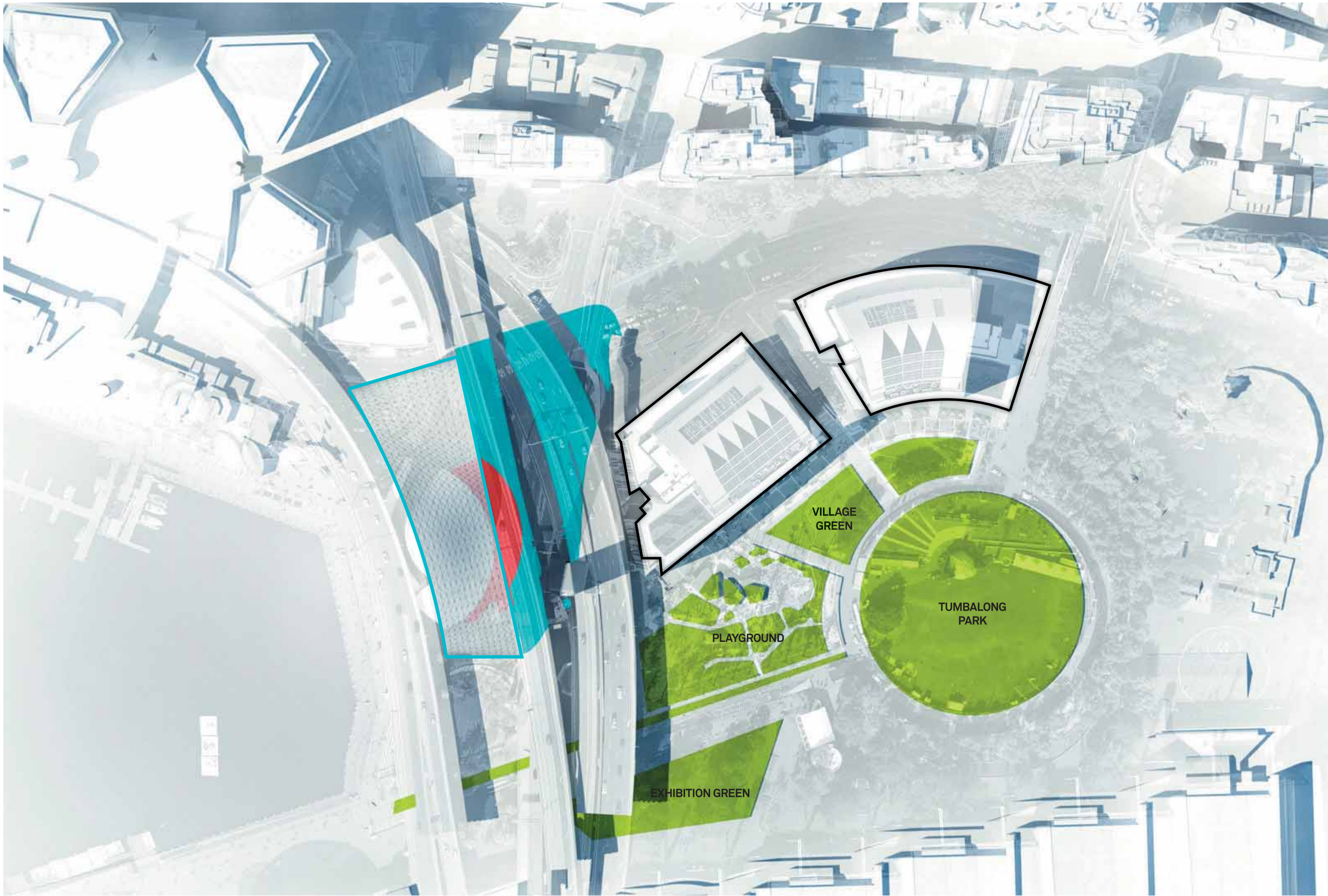
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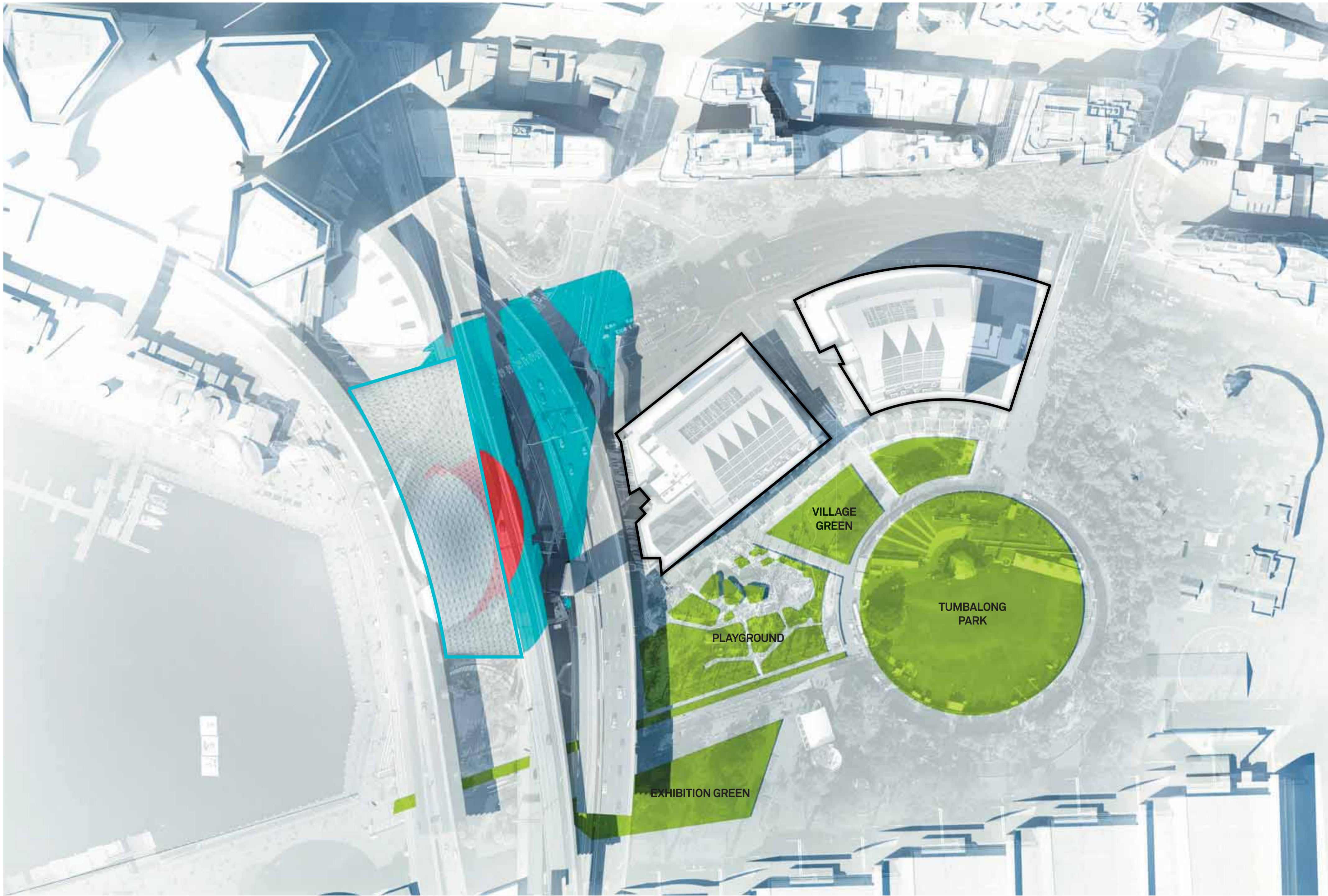
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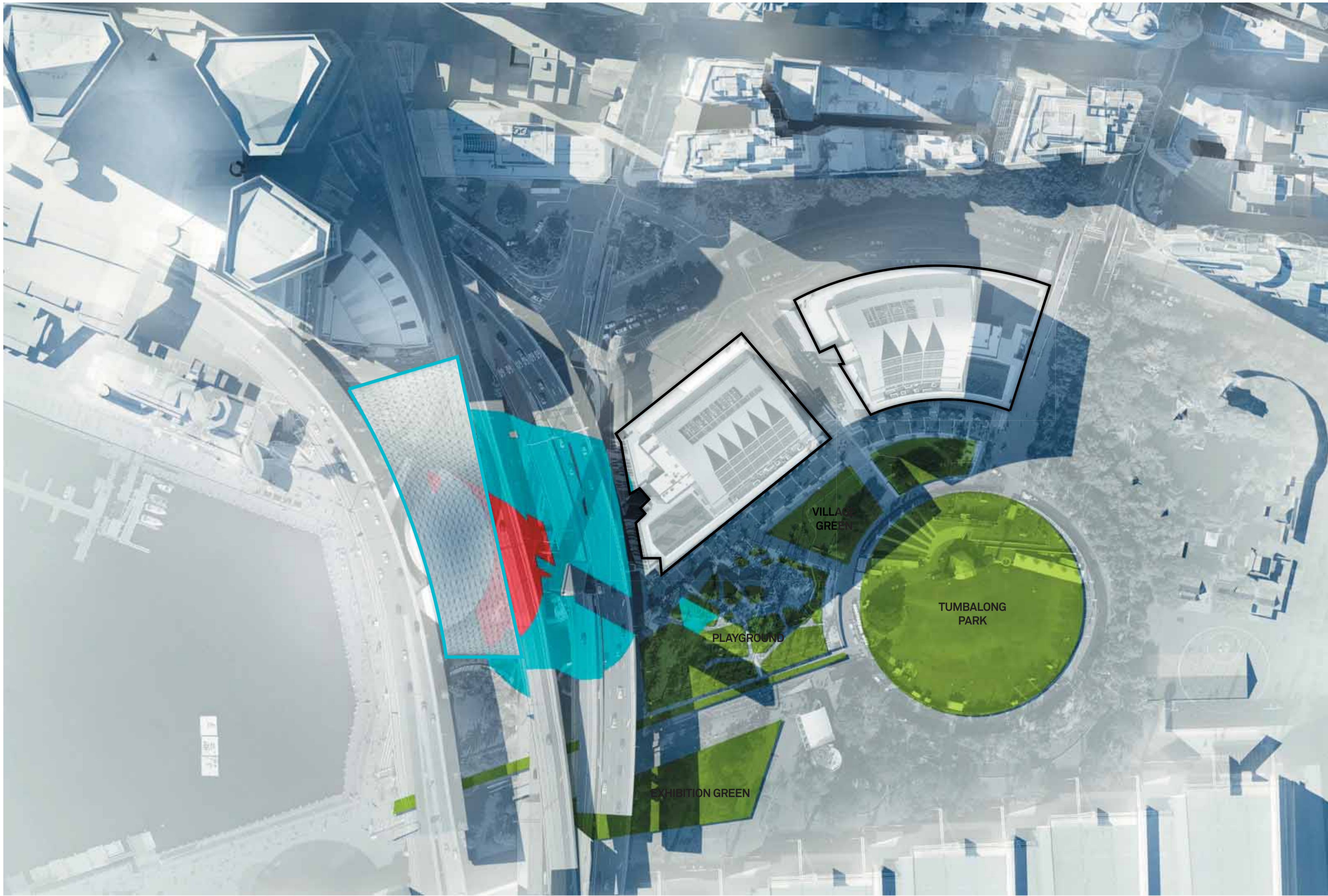
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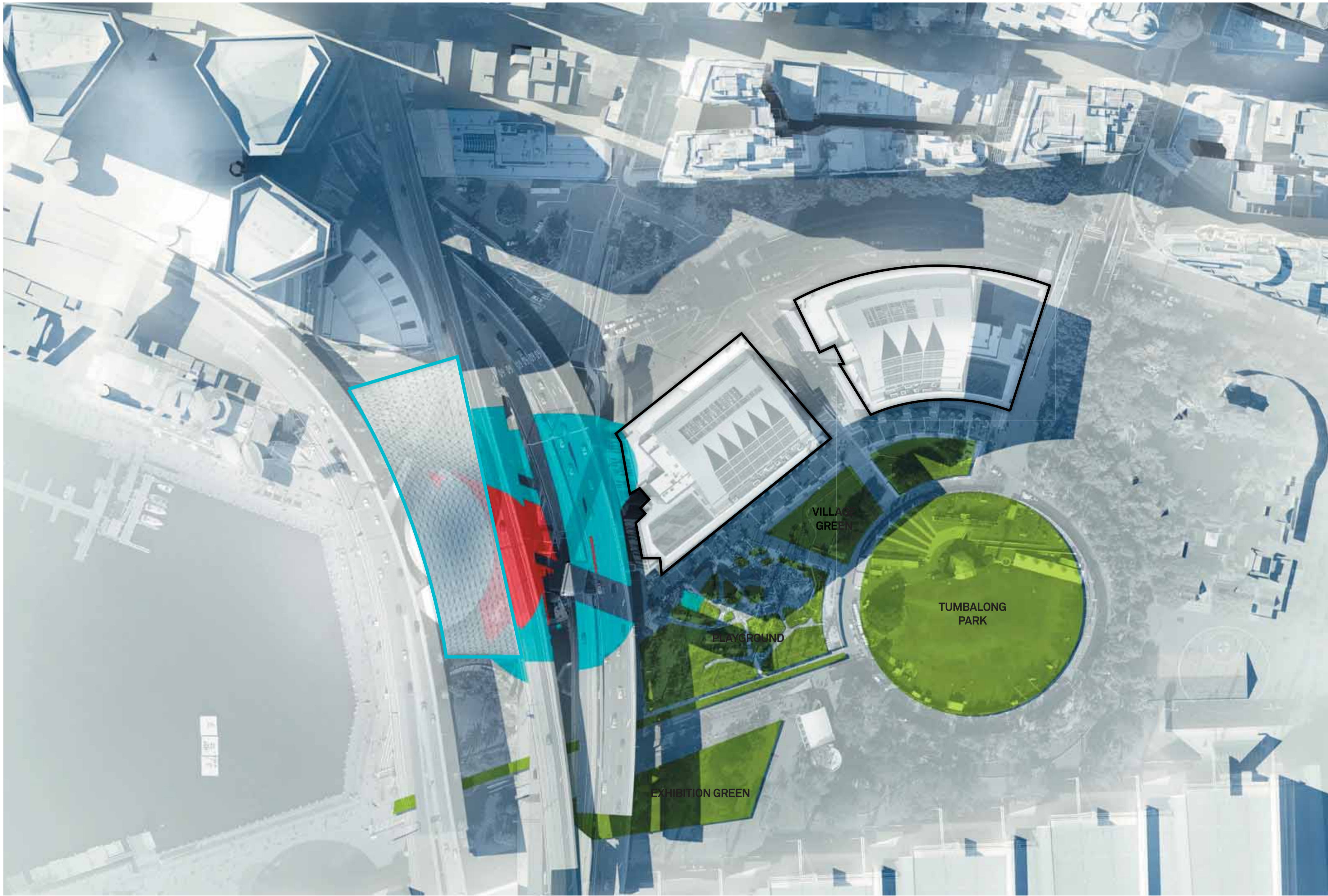
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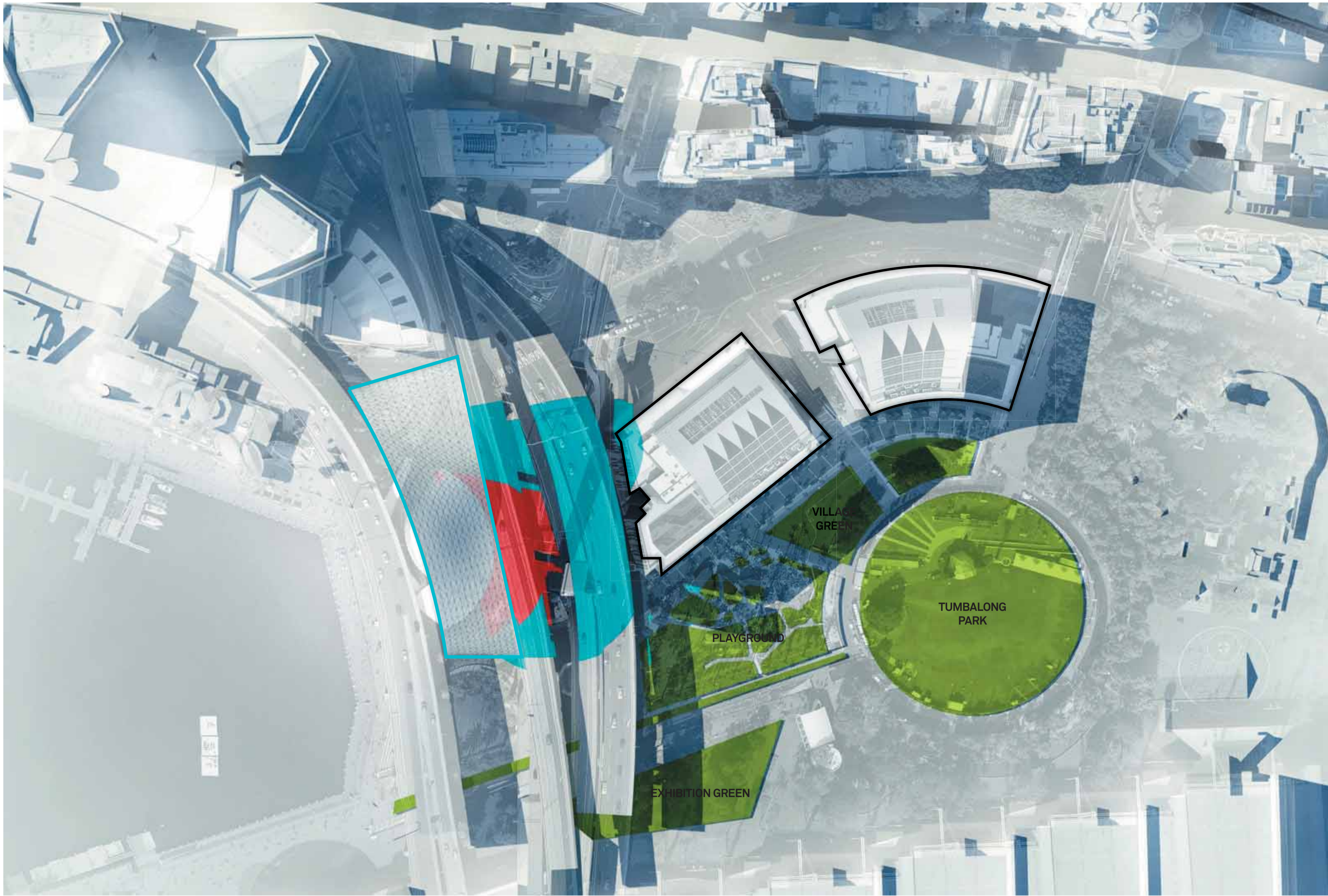
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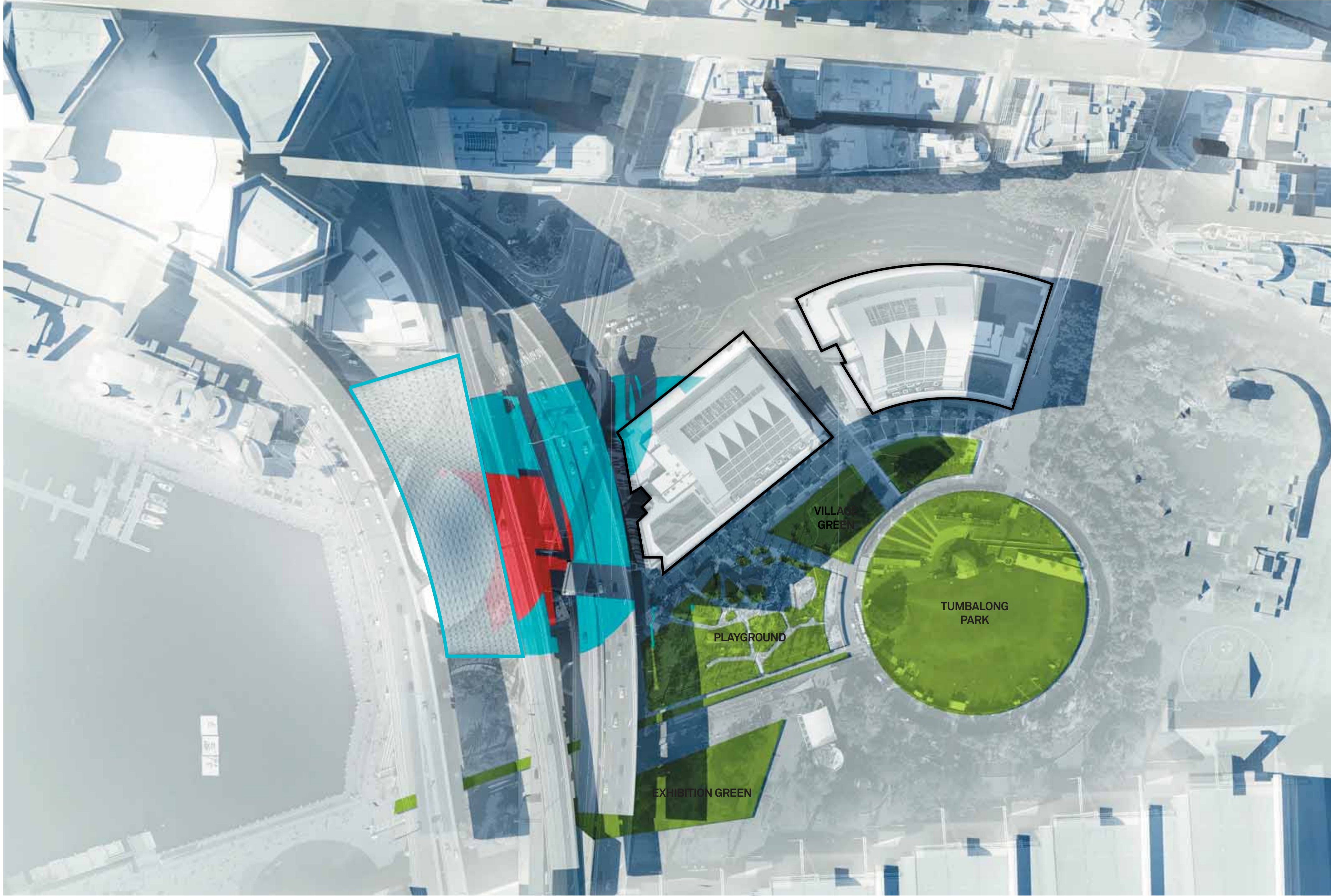
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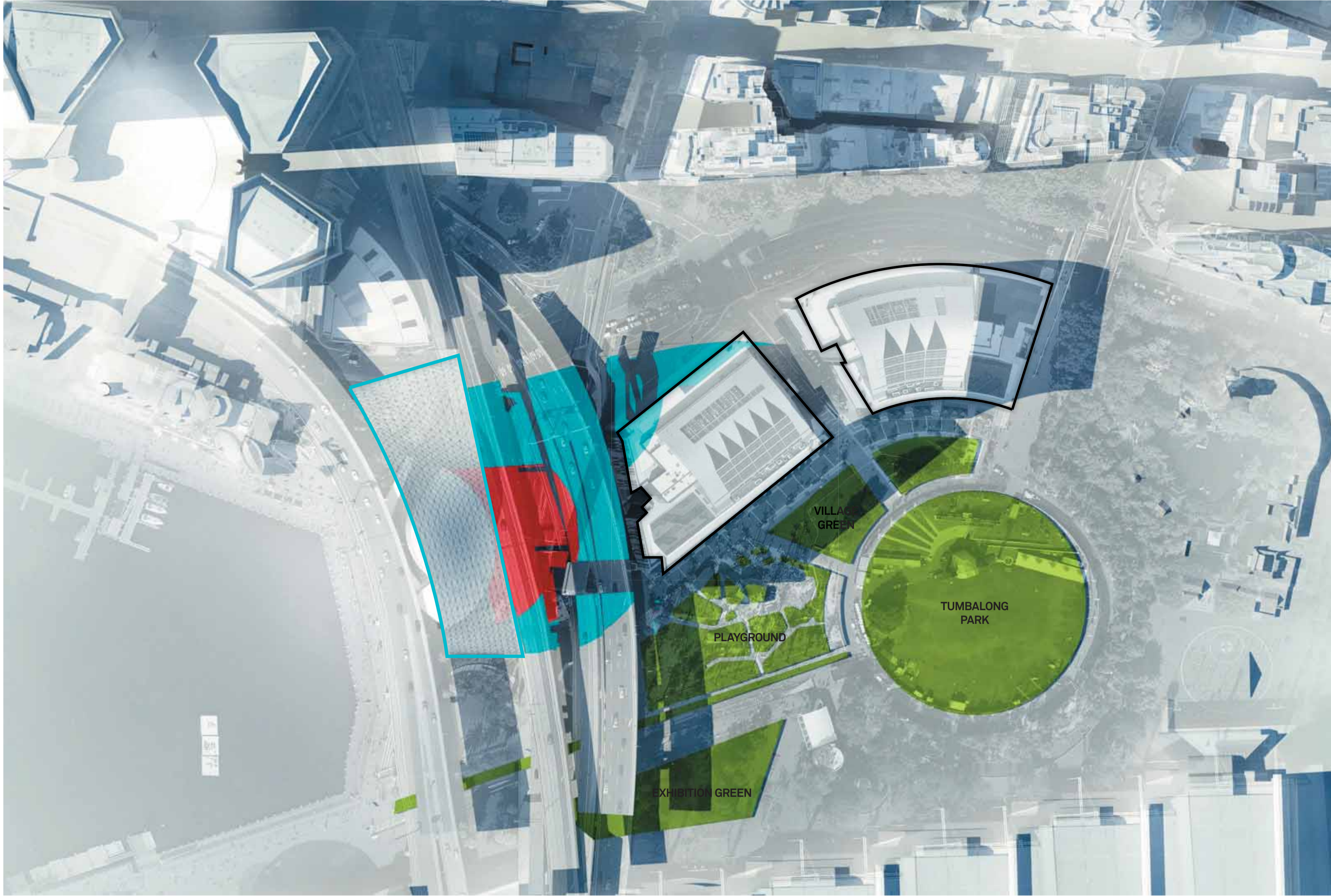
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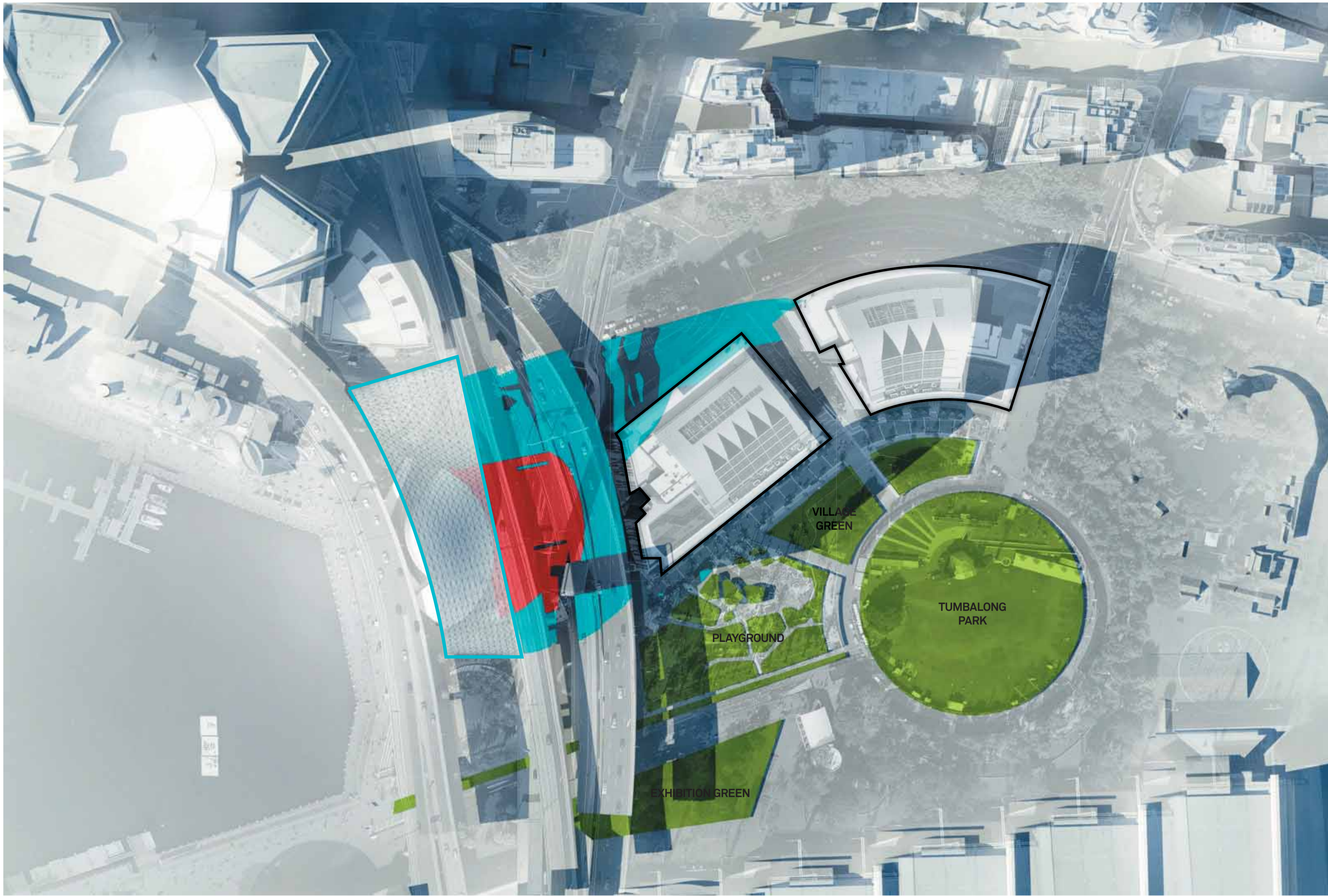
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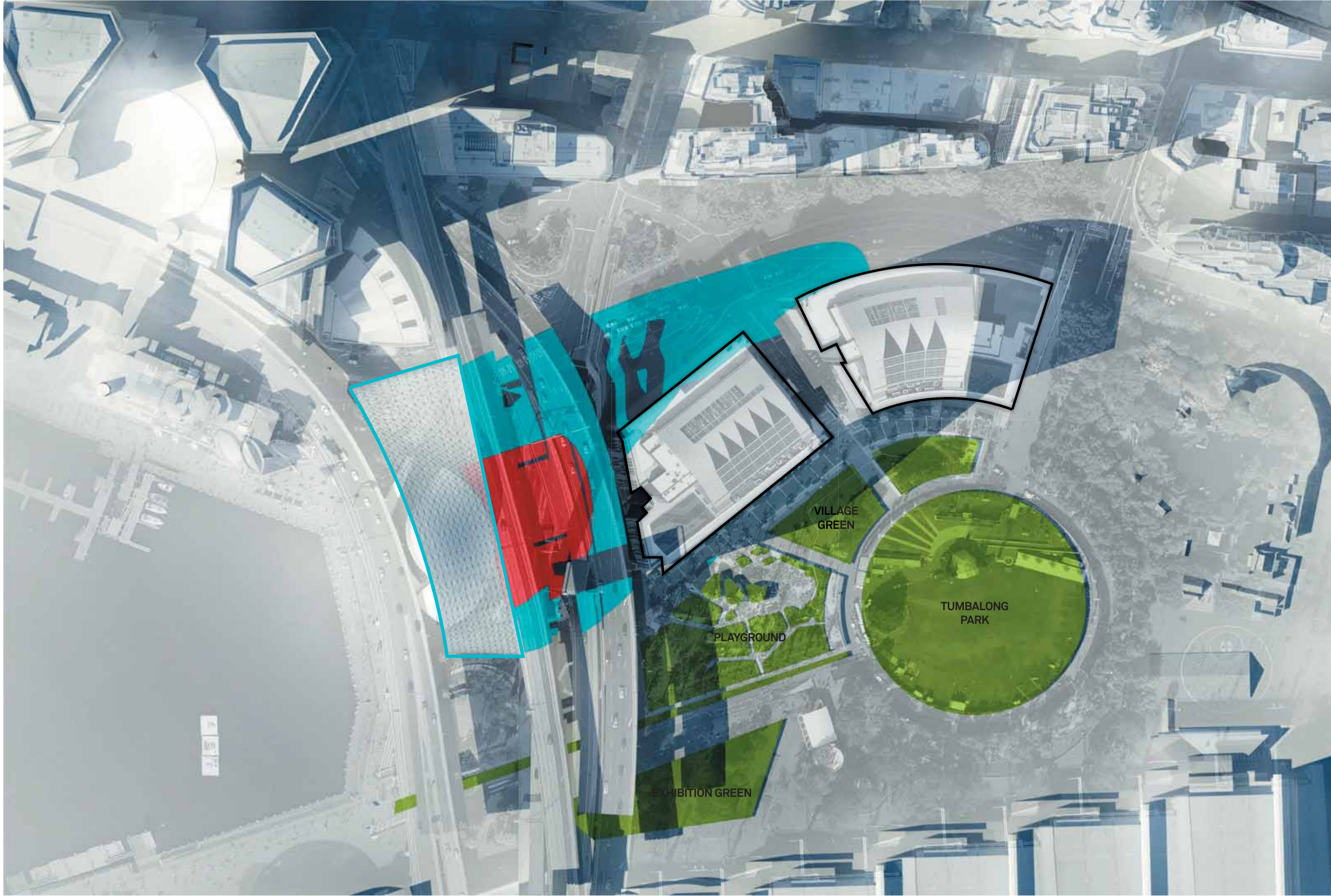
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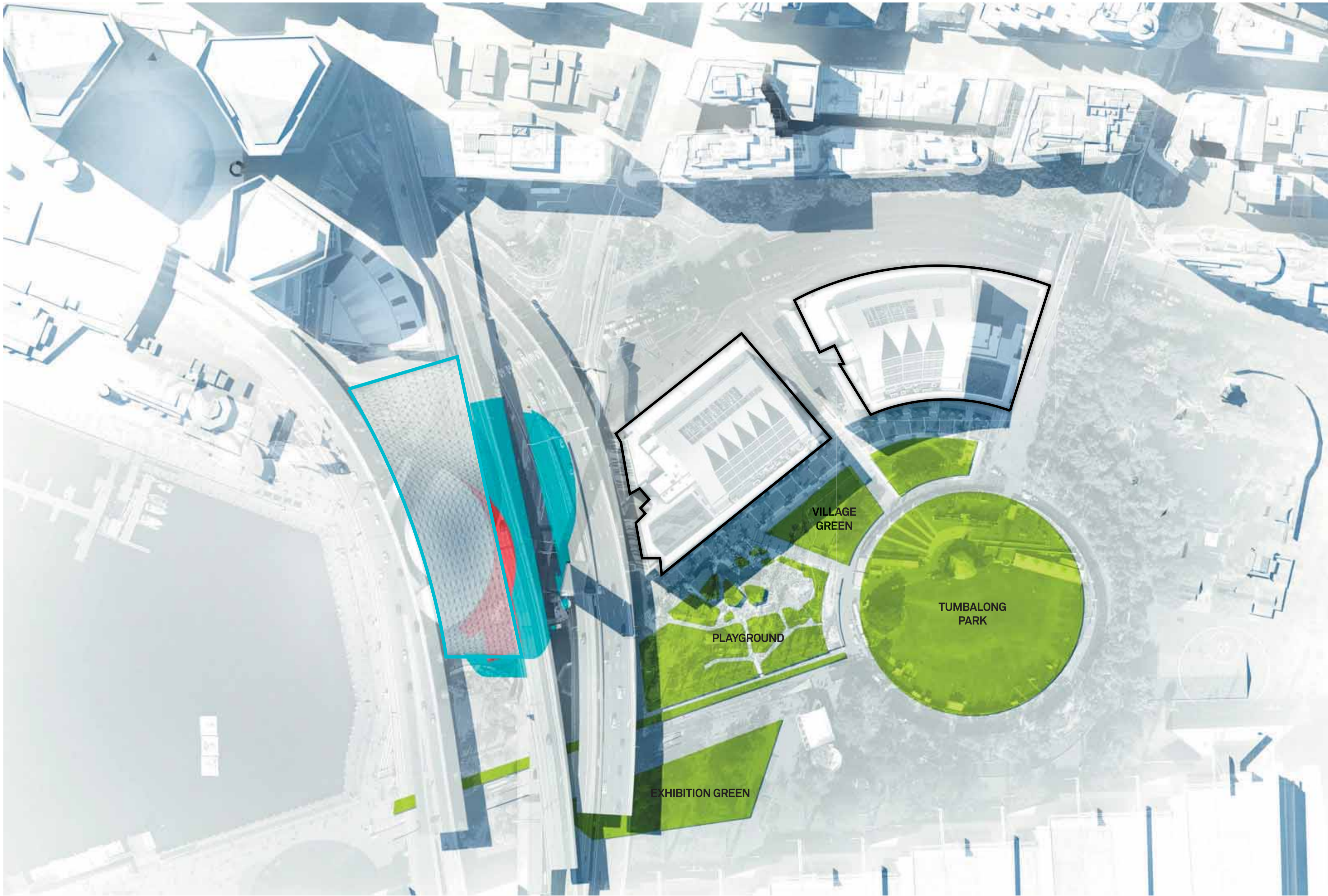
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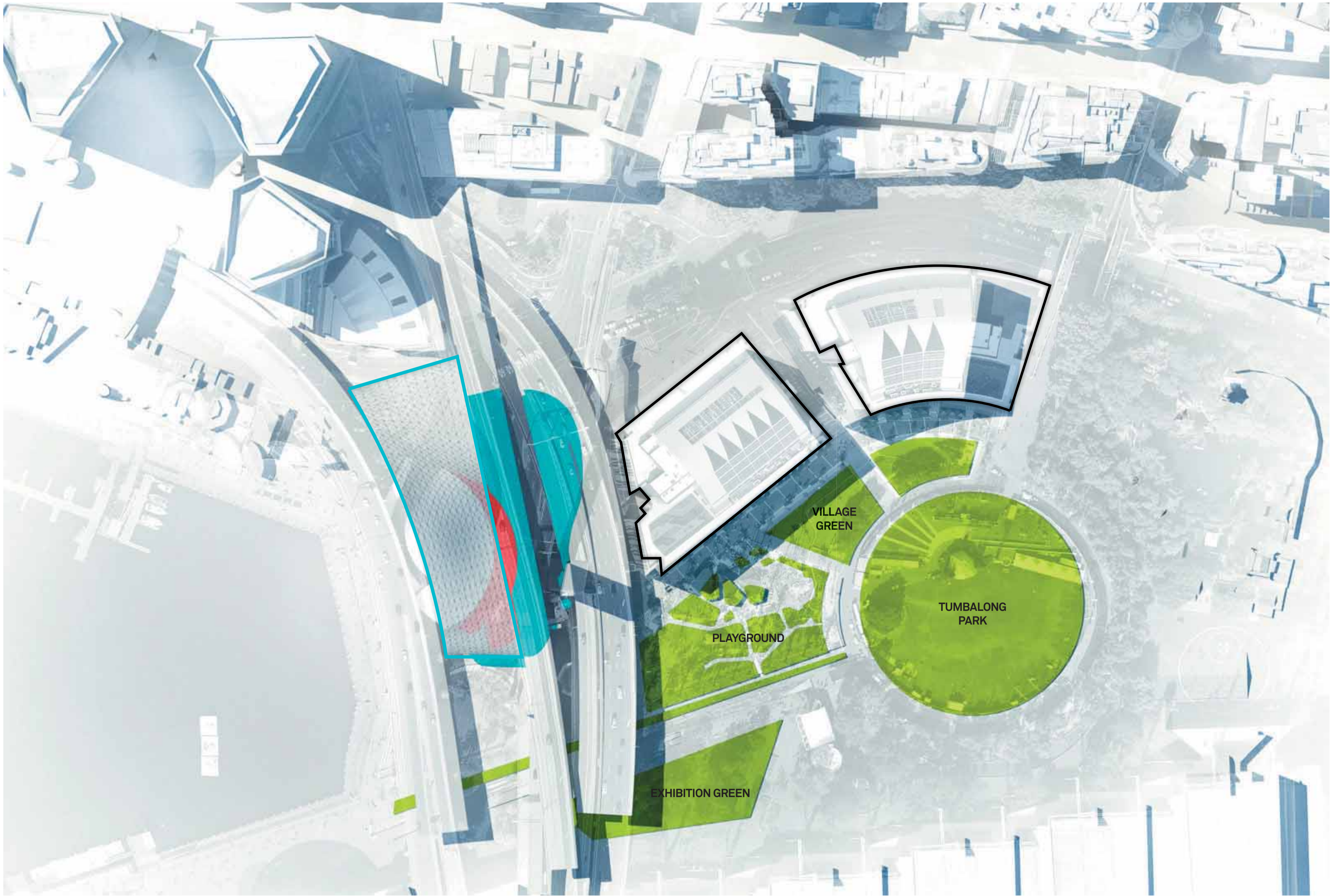
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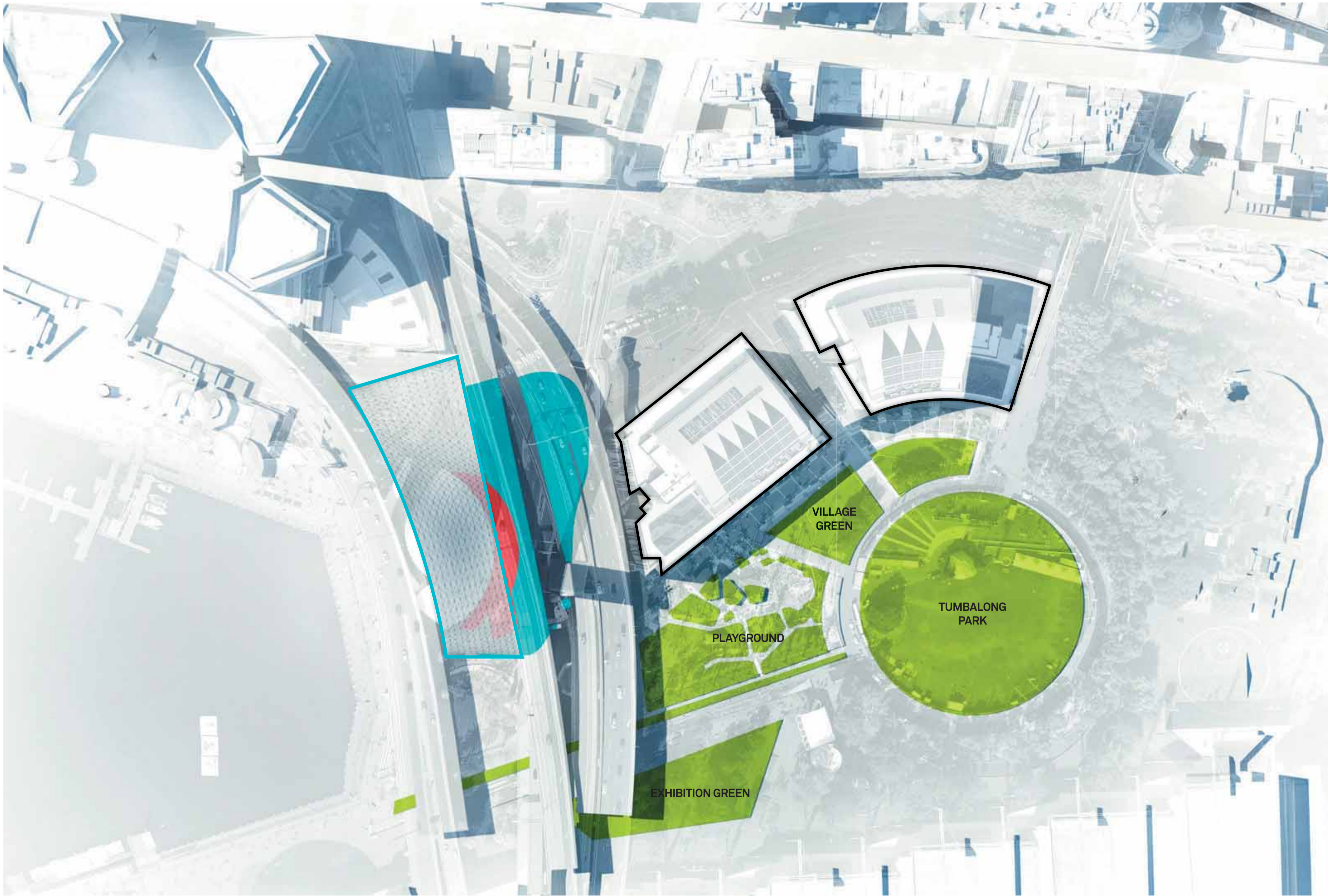
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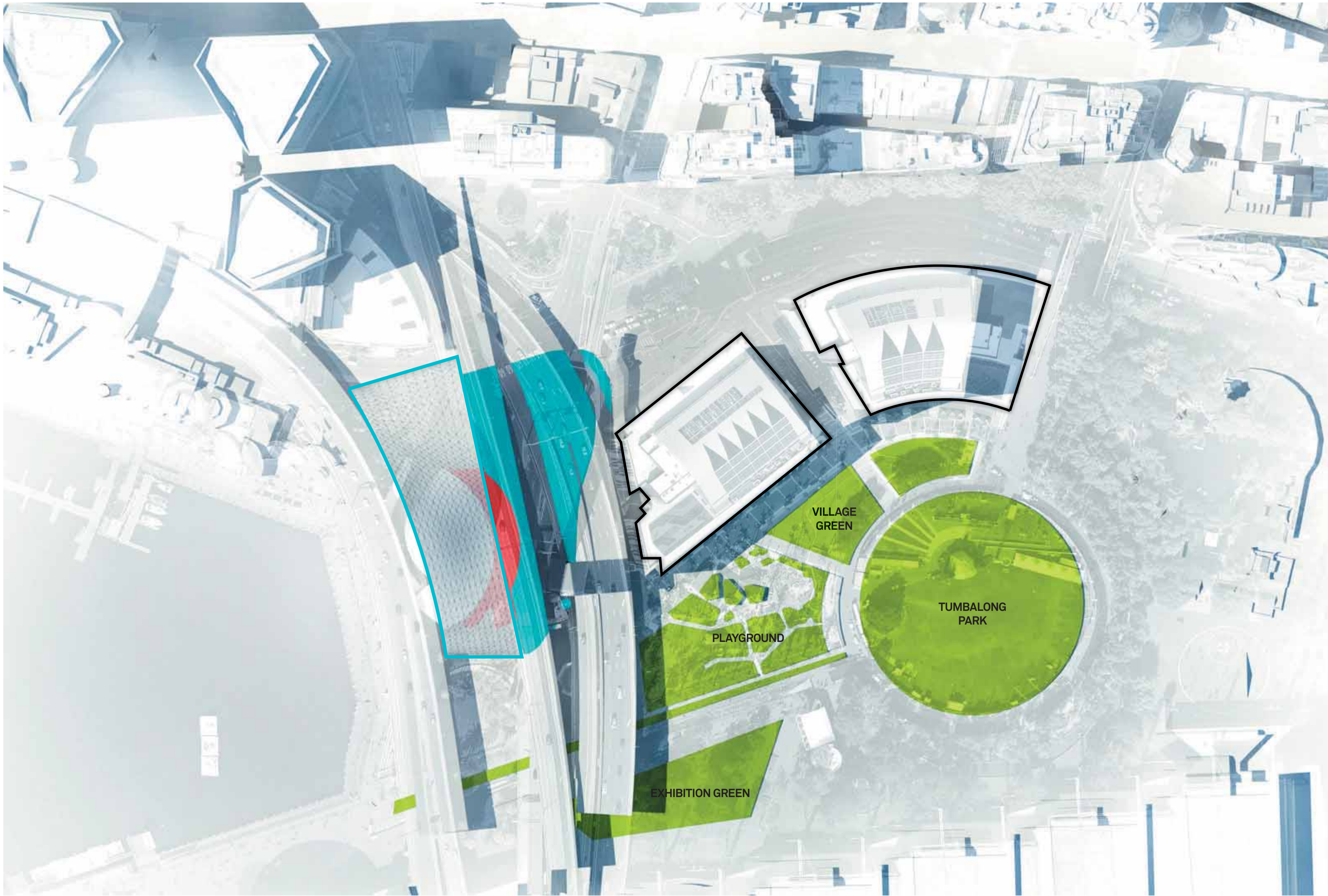
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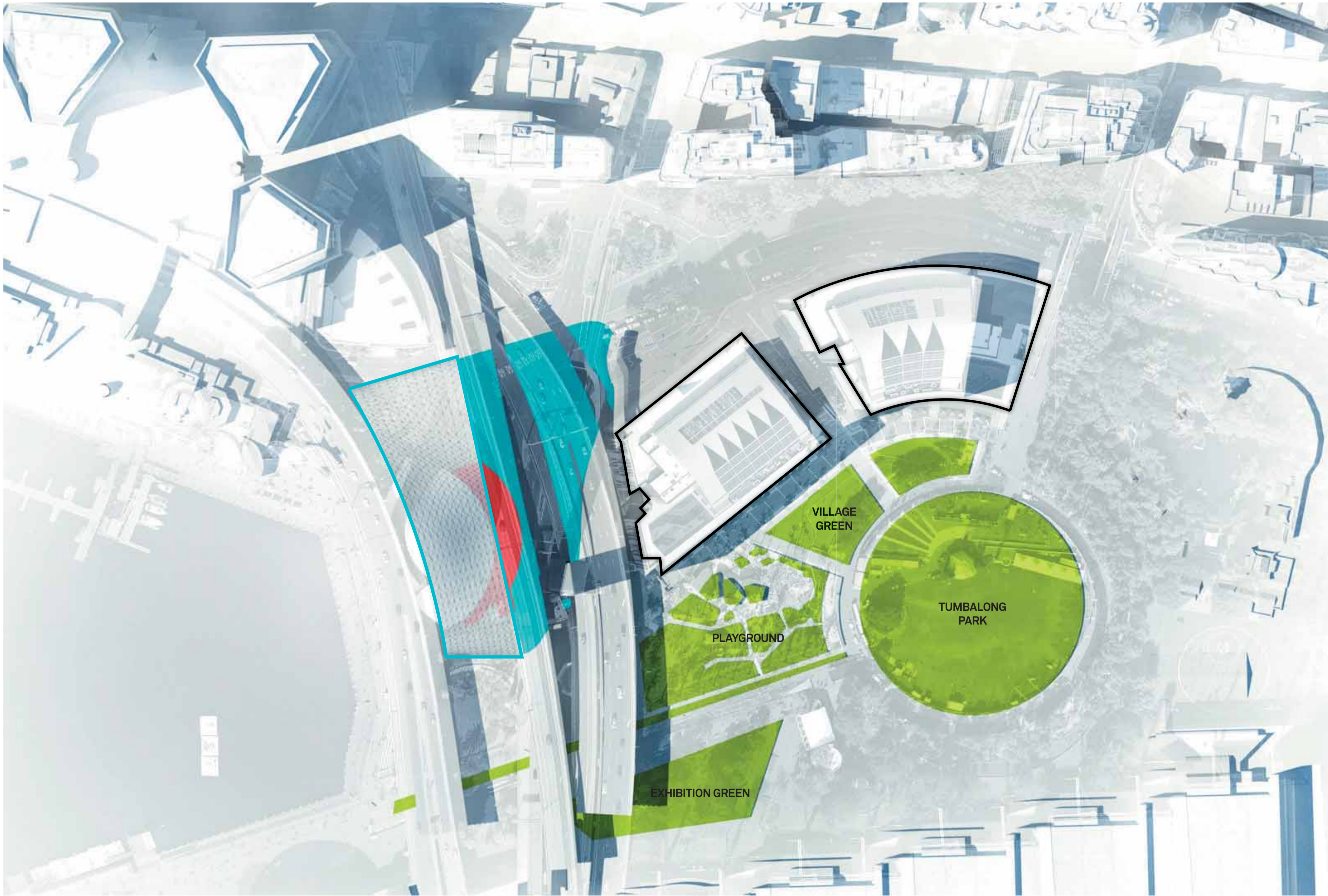
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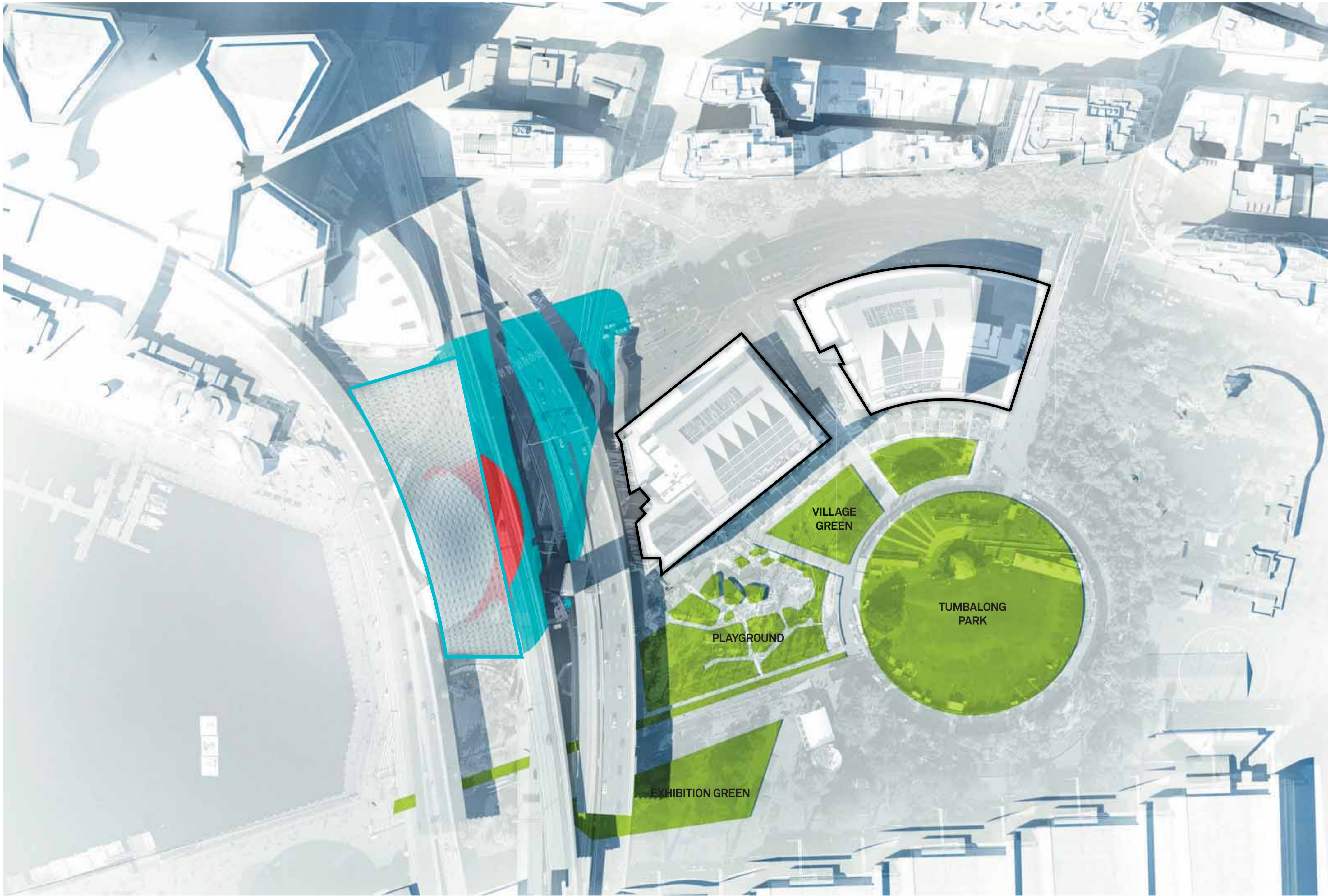
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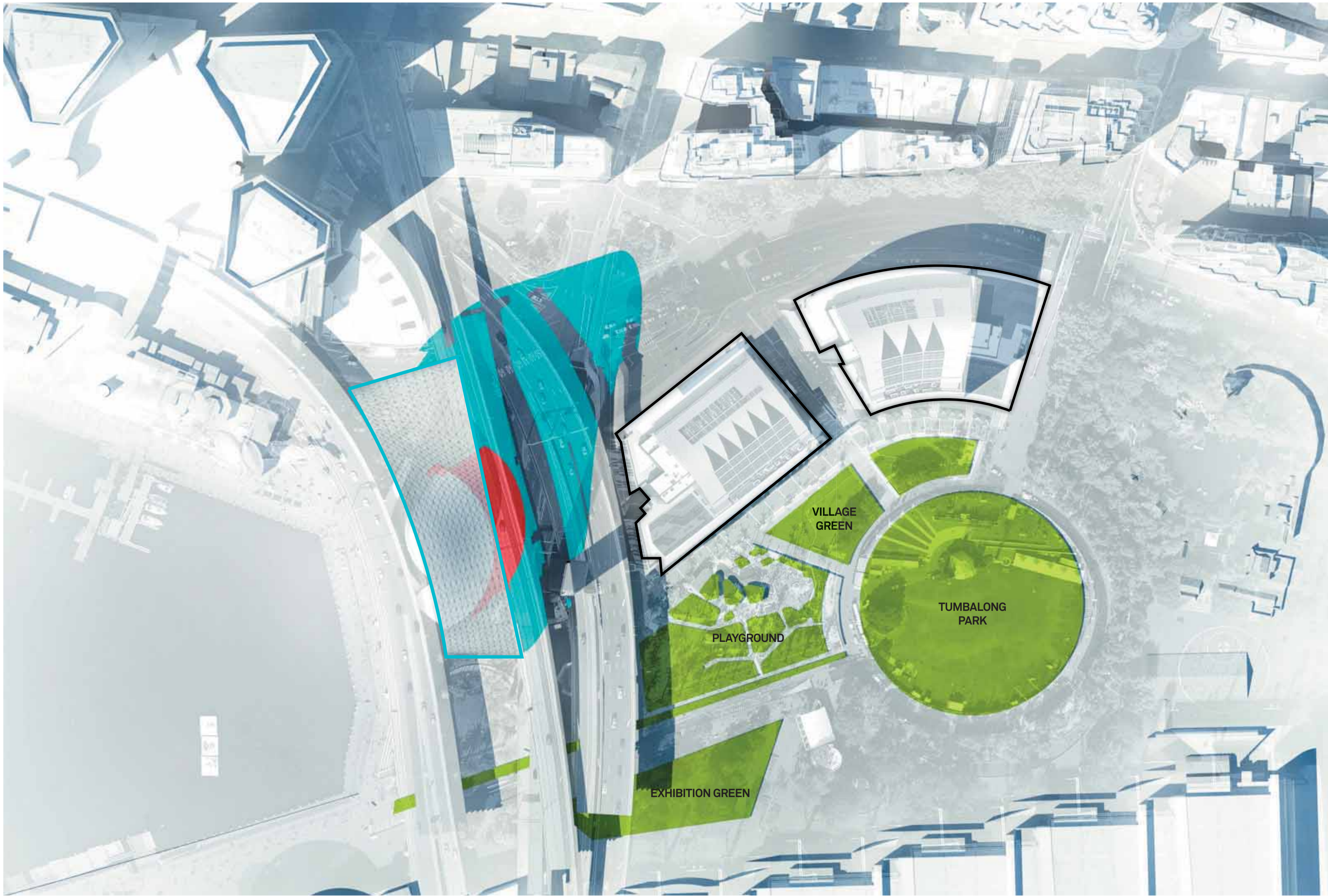
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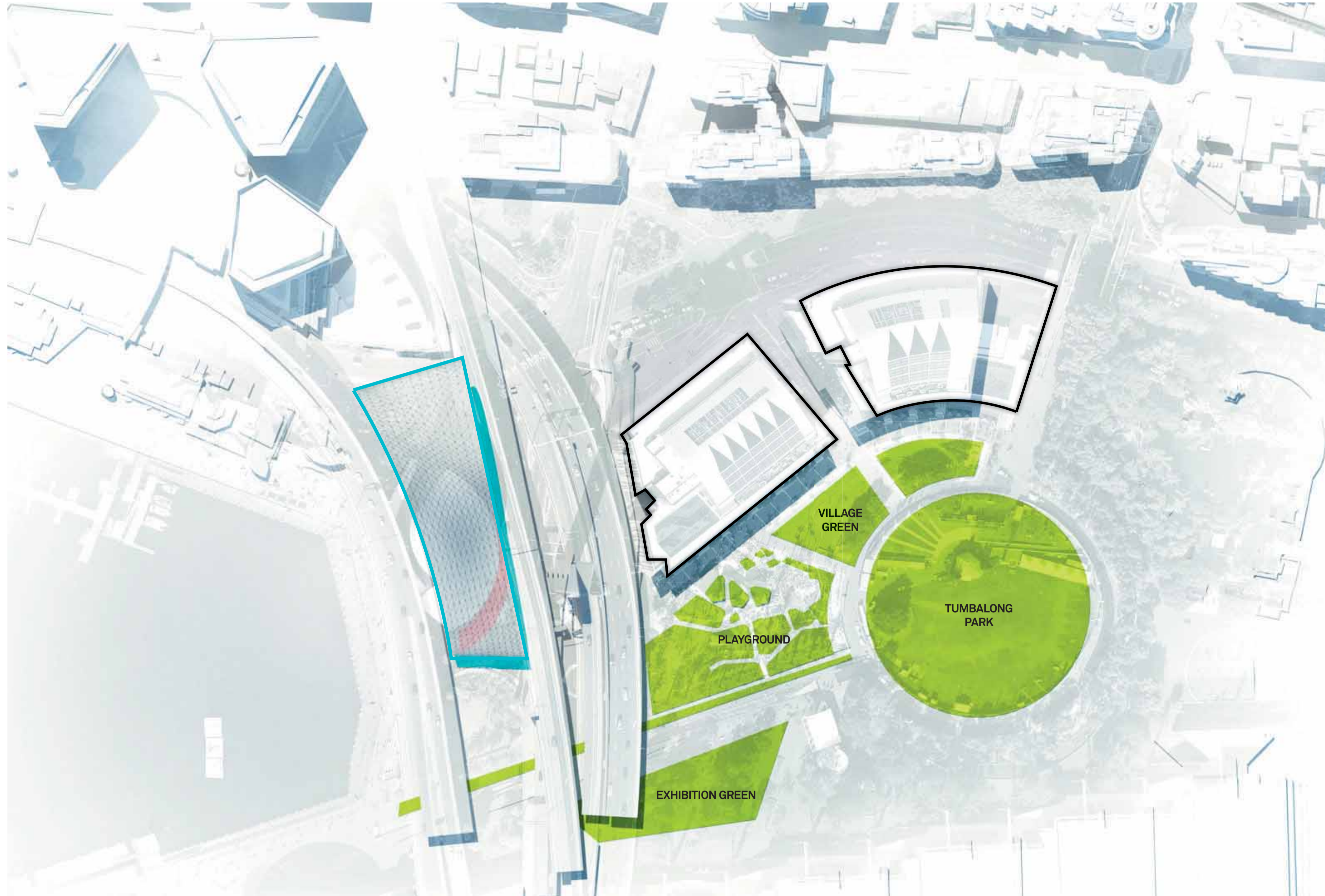
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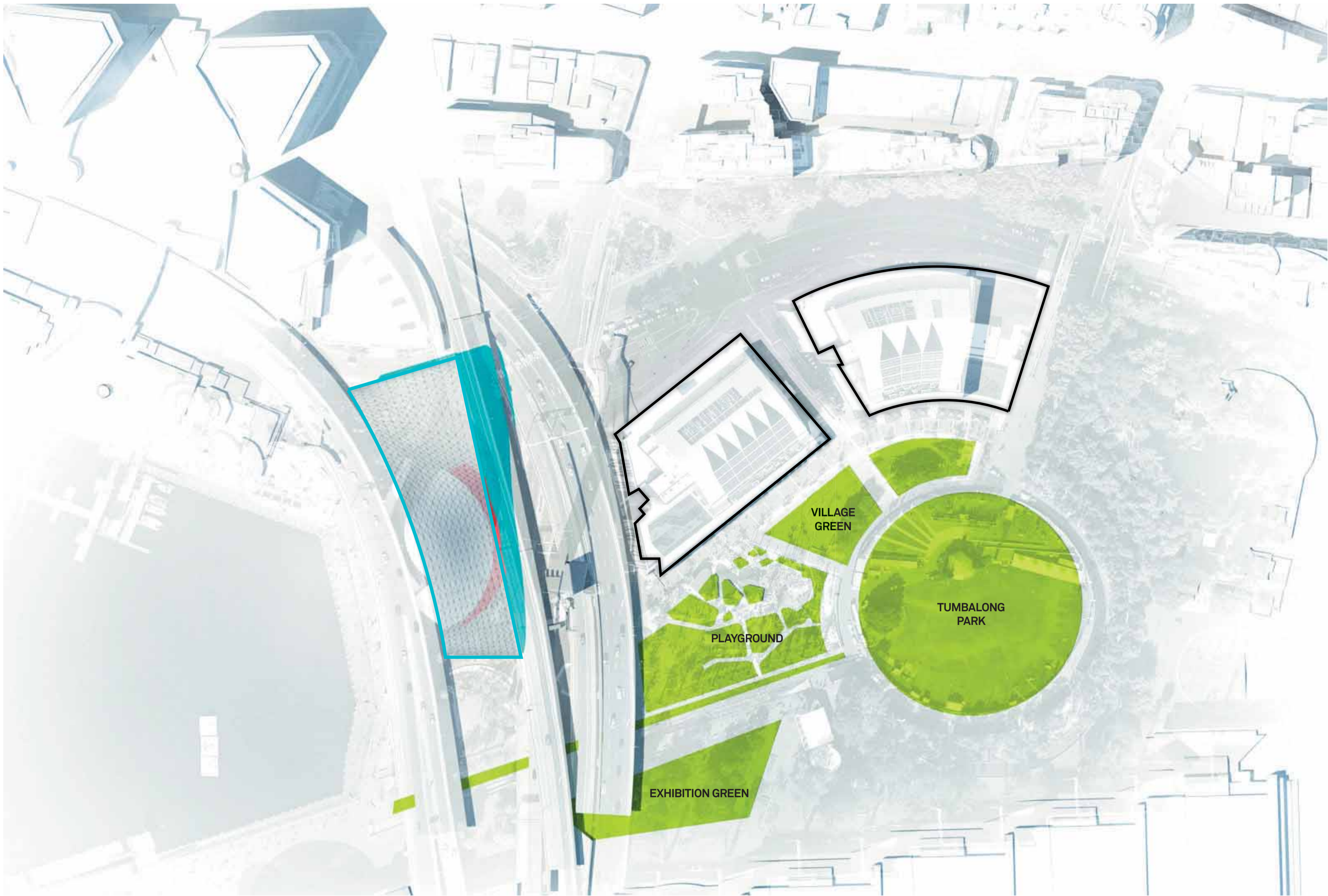
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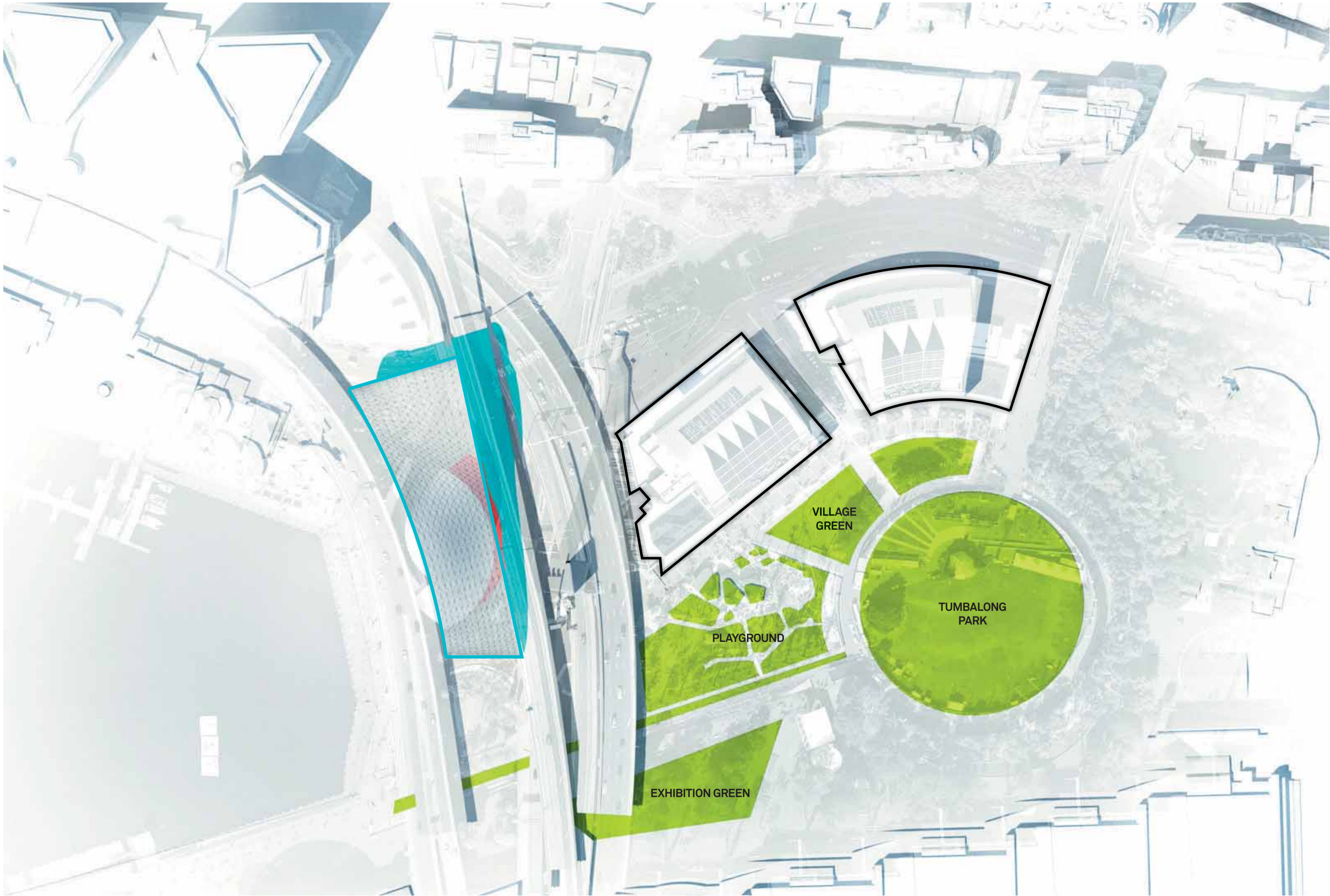
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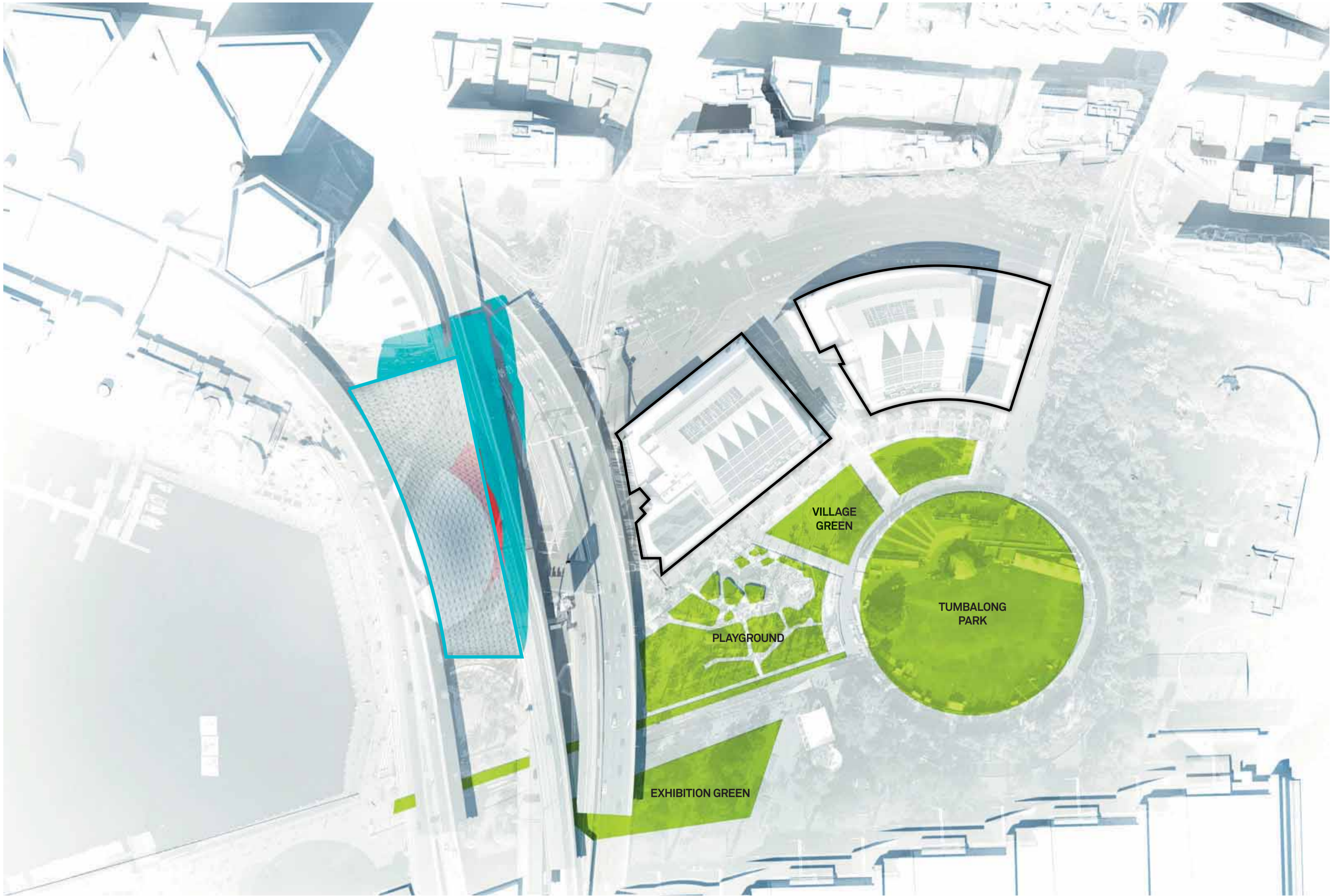
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EXISTING SHADOW

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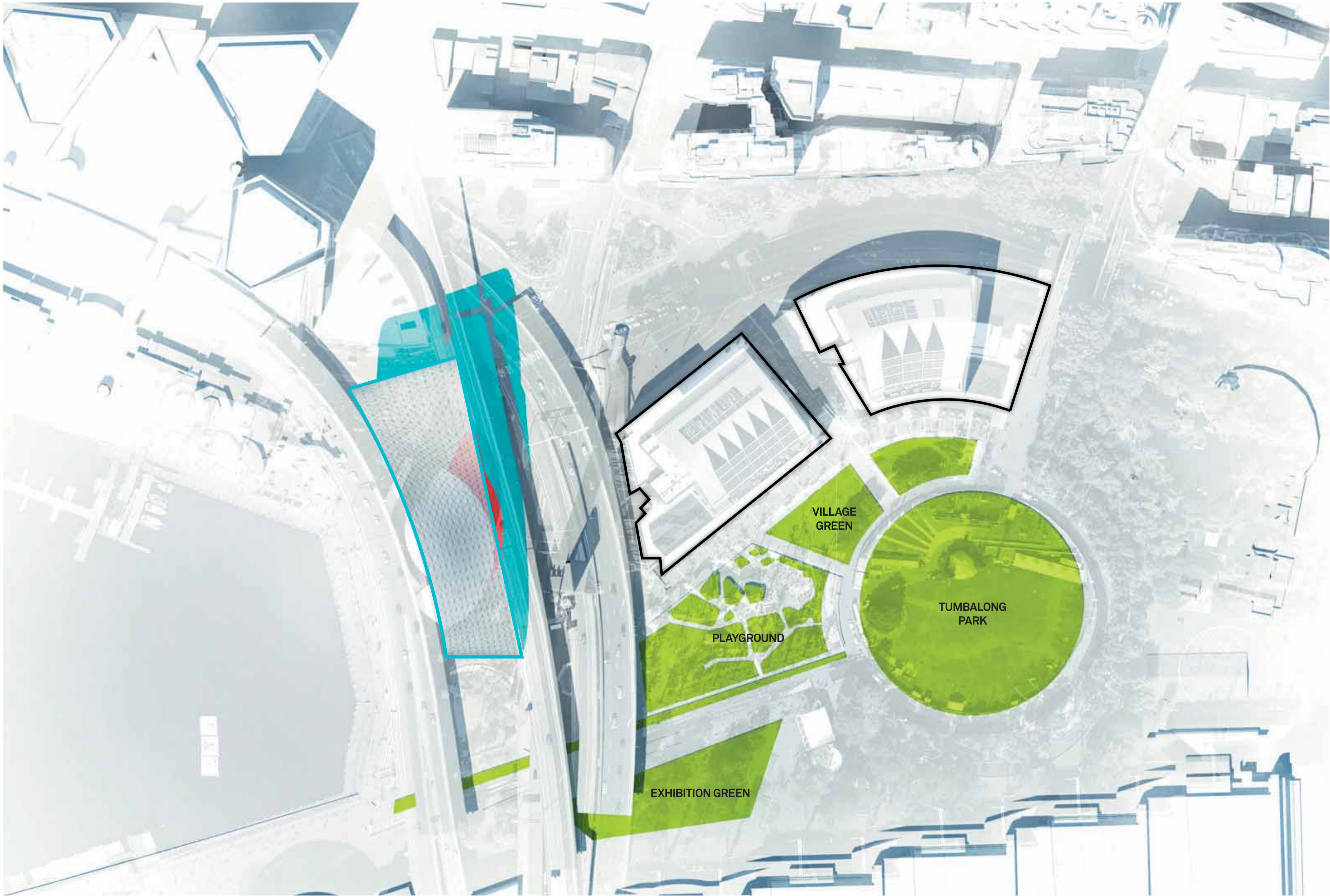
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EXISTING SHADOW

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DECEMBER 21 1400\_

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