

REQUIREMENT FOR AUTOMATED STORAGE AND RETRIEVAL SYSTEM

BUILDING PARAMETERS:

- 1) 85x85m = 7225 Sqm area
- 2) Roof height in the middle – 11 meters
- 3) Roof height in the ends – 9 meters

CHASSIS & LARGE PARTS STORAGE

Custom racking/stillage for chassis parts and big parts.
TBD later

SMALL & MEDIUM PARTS STORAGE

Capacity – 6000 bin locations
Area – 600 Sqm
Lower racks – Bin weight \leq 200 Kgs
Middle racks – Bin weight \leq 100 Kgs
Upper racks – Bin weight \leq 50 Kgs

BIW STORAGE

Capacity - 400 units storage
25x4 = 100 units in one row
Area – 2800 Sqm
Multi-storied Racking system
BIW Cabin weight – 700 Kgs

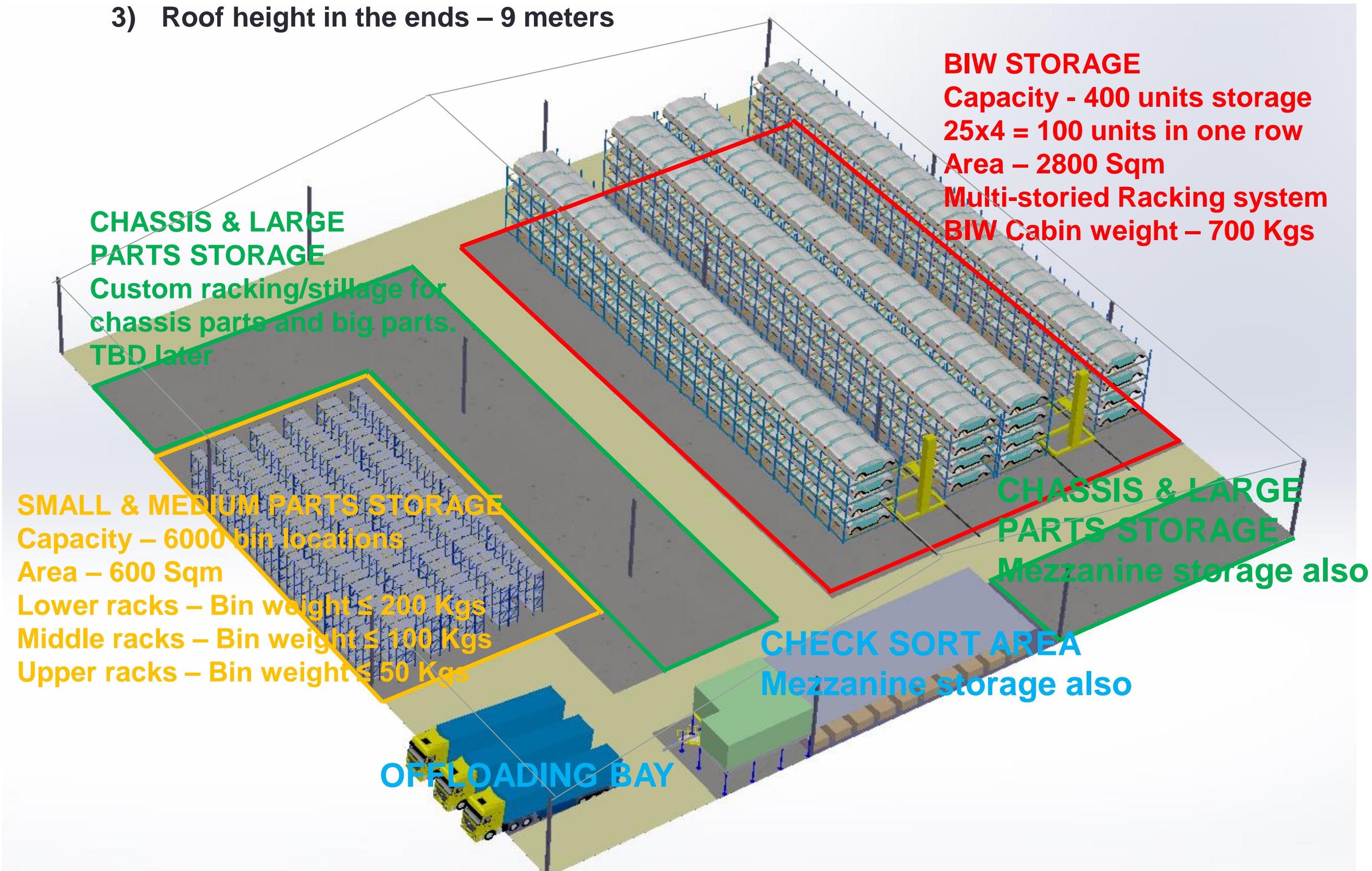
CHASSIS & LARGE PARTS STORAGE

Mezzanine storage also

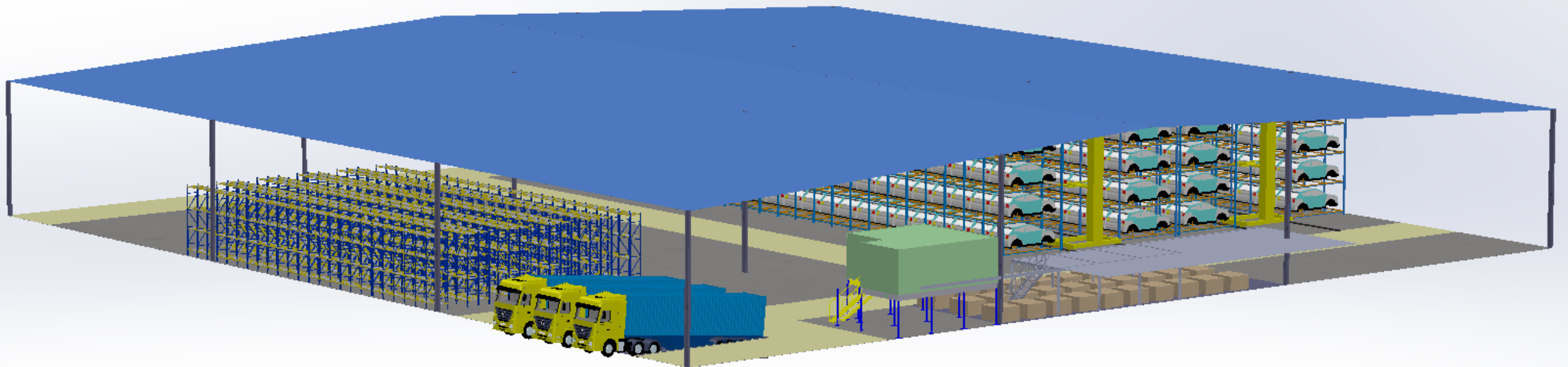
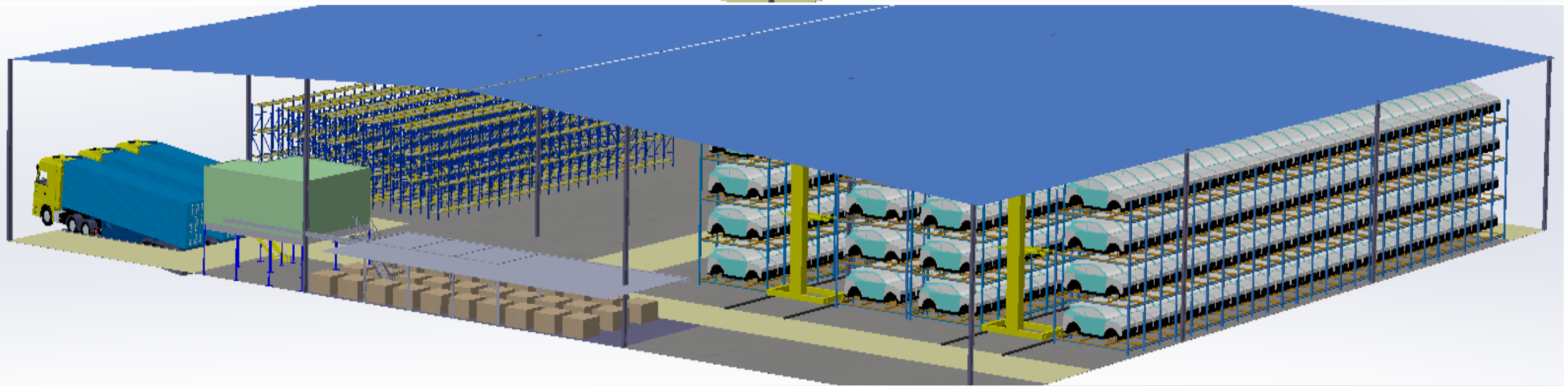
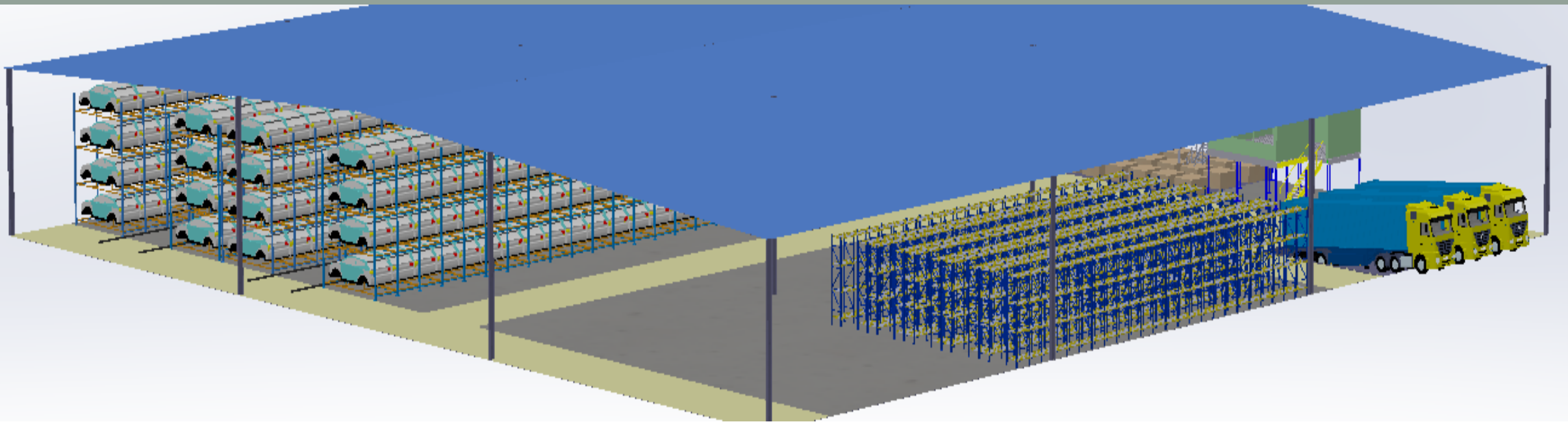
CHECK SORT AREA

Mezzanine storage also

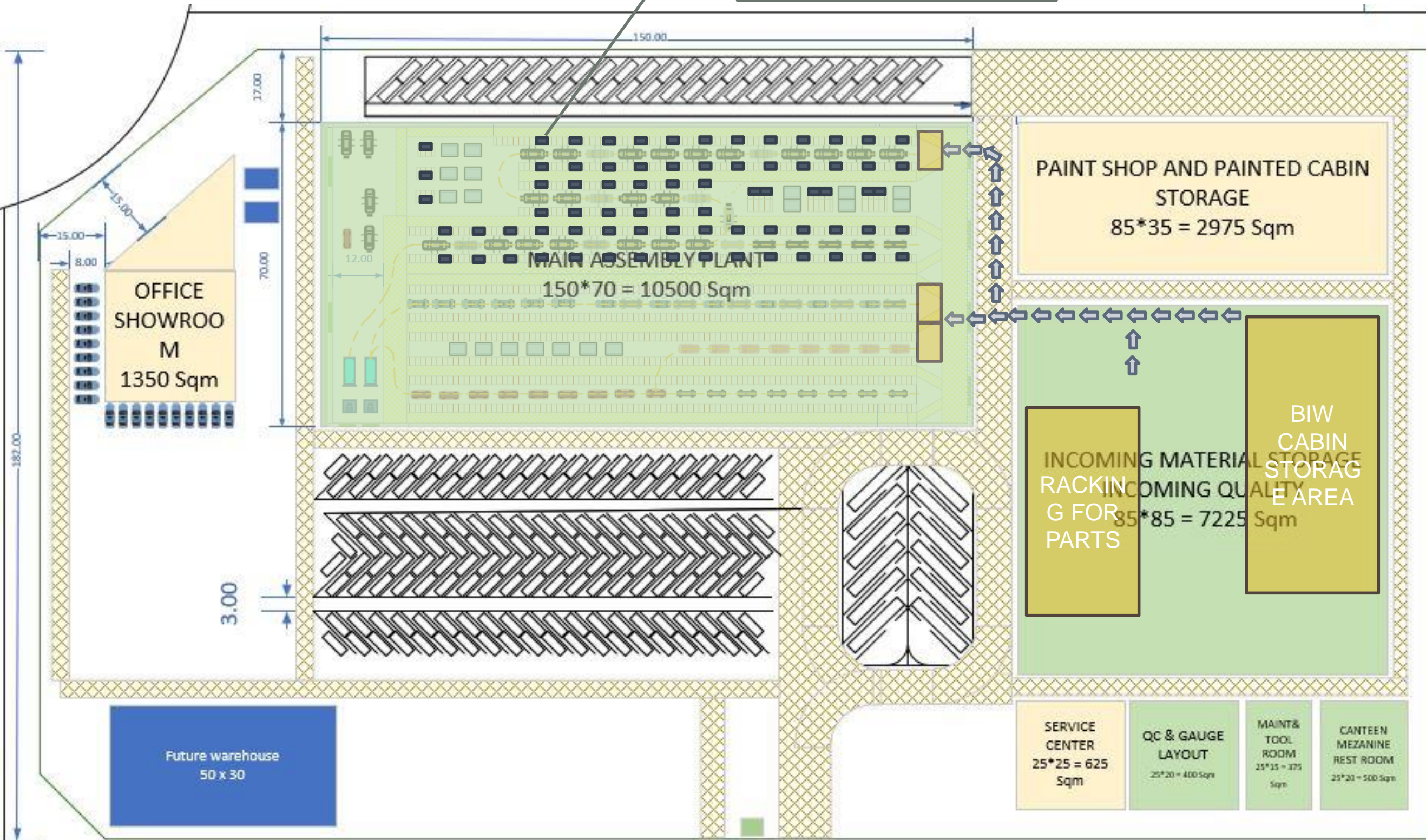
OFFLOADING BAY







The rectangular blocks are the trolley drop locations



For BIW (cabins):

- 1) The cabins to be stored in a multi level racking system.
- 2) The cabins will be transported on a fabricated stand. The stand will be used during the transport from supplier to Dubai facility, storage in Dubai facility, movement inside the facility.
- 4) The racking should be multi-level. Proposed is 4 level with a maximum height of 8 meters.
- 5) Preferred to have 25 columns, so that each row it will be $25 \times 4 = 100$ cabins.
- 6) There must be a stacking mechanism like the one in the picture, which can be accessible on both sides.
- 7) An option for the internal movement of the cabins from warehouse to the assembly line could be AGVs. Probably a wheeled trolley with AGV could be one solution.



For other parts:

- 1) The small and big parts will be moved to assembly building on custom design stillages. For each stillages there could be one or more items with a batch qty (approx. 30 units – For one day usage)
- 2) Few AGVs can be used for scheduled supply of goods, and few tuggers for rest of the supplies.
- 3) These AGVs/Tuggers to drop the stillages in all the stations in the production facility.

