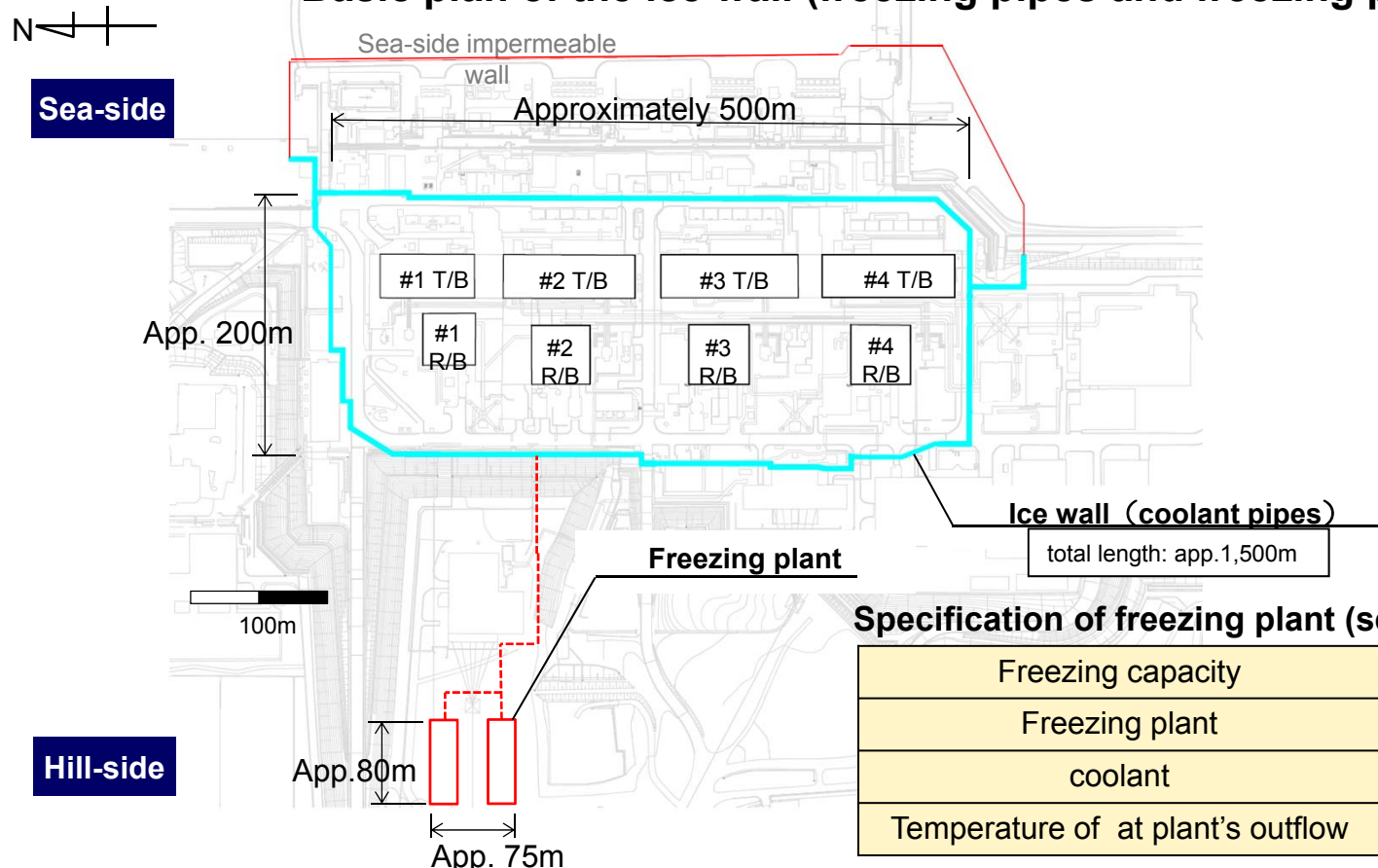


Start of the Ice Wall Construction

- Installing casings of boring (outer pipe) and implanting freezing pipes to places excluding underground piping penetrating areas, part of the construction of the ice wall, has been started on June 2, 2014.

Basic plan of the ice wall (freezing pipes and freezing plant)

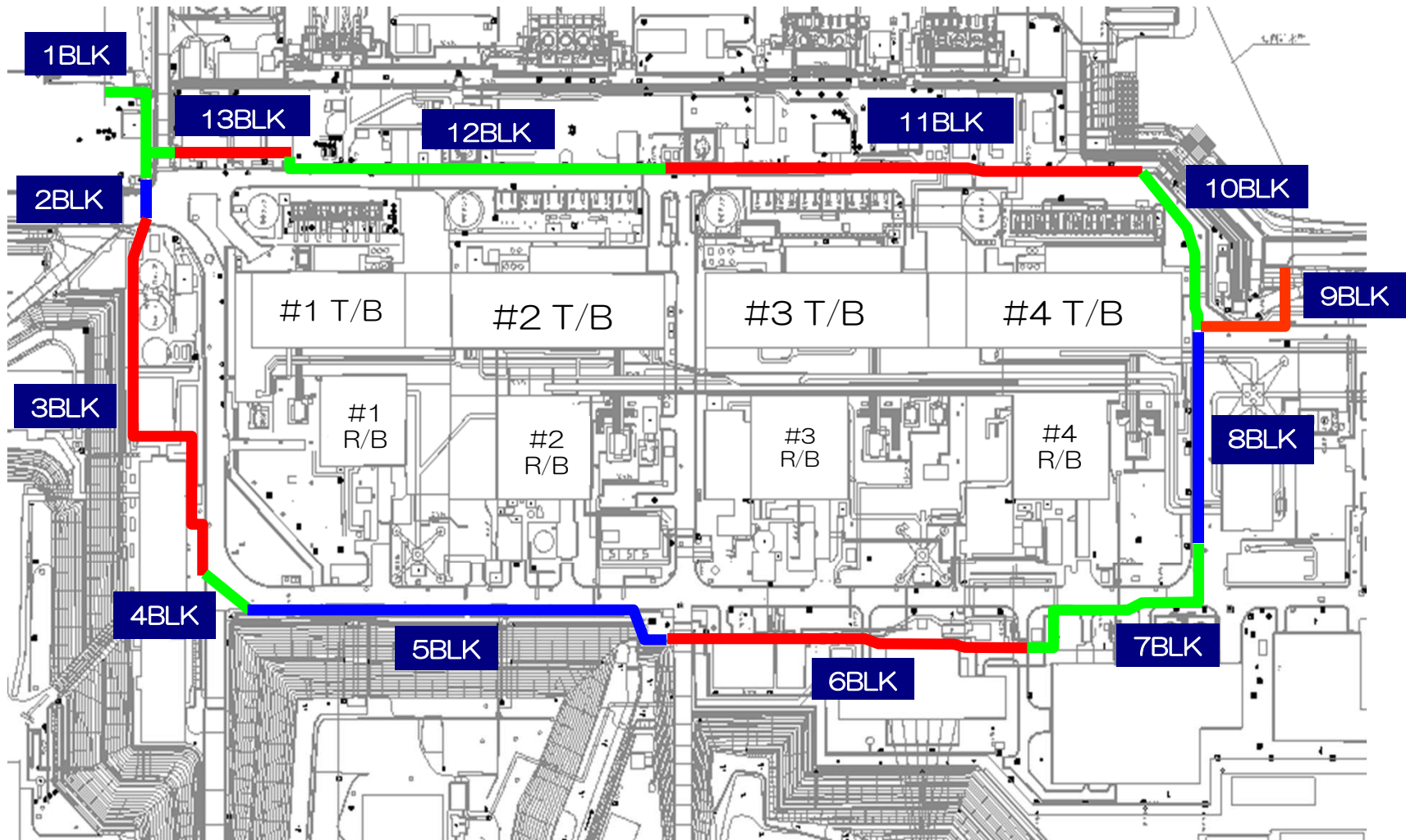
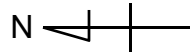


Specification of freezing plant (set on O. P. +35m base)

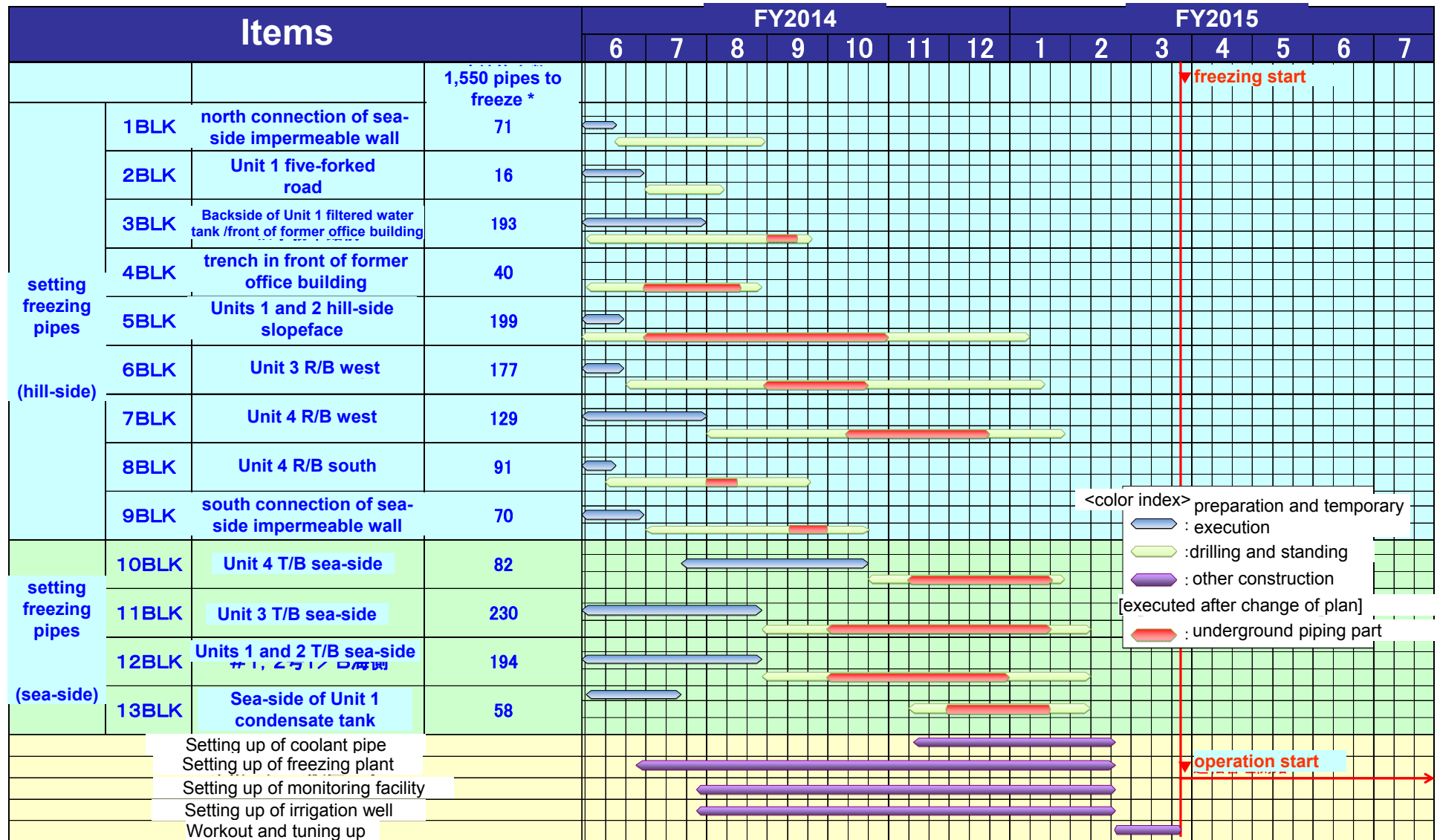
Freezing capacity	261kW/plant
Freezing plant	30 plants
coolant	Calcium chloride solution
Temperature of at plant's outflow	App. -30°C

We cool coolant to about -30C in freezing plant, which runs into every freezing pipe through coolant pipes, and make the ice wall. After circulation, return warm coolant to freezing plant and cool again.

Drawing of the Frozen wall blocks



Building Process of Ice Wall



*The number of pipes is temporary, and subject to change depending on the environment.

Building process of Frozen pipes

- Set frozen pipes in the ground, and connect coolant pipe circulating coolant about -30 °C.

