



## CVOW-C Offshore Wind Farm

# CVOW-C Project Construction

## Installation of Foundations

- The Wind Turbine Generator (WTG) Foundation concept consists of two parts, a lower foundation pile (monopile) driven into the seabed and an upper transition piece mounted on top of the monopile, referred to as the WTG Foundation.
- Installation of the WTG Foundations would entail lifting, upending, and placement of each WTG Foundation at its construction and installation location.
- A two-part WTG Foundation would comprise a monopile with grouted or bolted transition piece or a single part, continuous monopile integrated with the transition piece.
- The WTG Foundations would have scour protection installed around the base of the monopile.

## Installation of Wind Turbines

- The WTG construction and installation process consists of the load-out, offshore transport, mechanical erection, and offshore commissioning of the WTGs.
- Depending on the water depth at the WTG construction and installation location, one or two-layers of scour protection would be required. Scour protection would consist of large rocks sourced from the U.S. and/or Canada and would be installed with either a jack-up vessel (JUV) or dynamically positioned (DP) vessel equipped with a fallpipe.
- The monopile would be placed on the seabed on top of the pre-installed scour protection layers and driven to the target depth of penetration by an onboard hydraulic hammer, which is guided by the pile gripper.
- Monopiles would be installed by either one or more dynamically positioned heavy lift vessels (HLVs) or JUVs.
- Monopiles would be installed in one or more years between May 1 and October 31 to avoid the North Atlantic right whale migration season.
- WTG construction and installation activities are anticipated to last up to 30 months.

## Offshore Substations

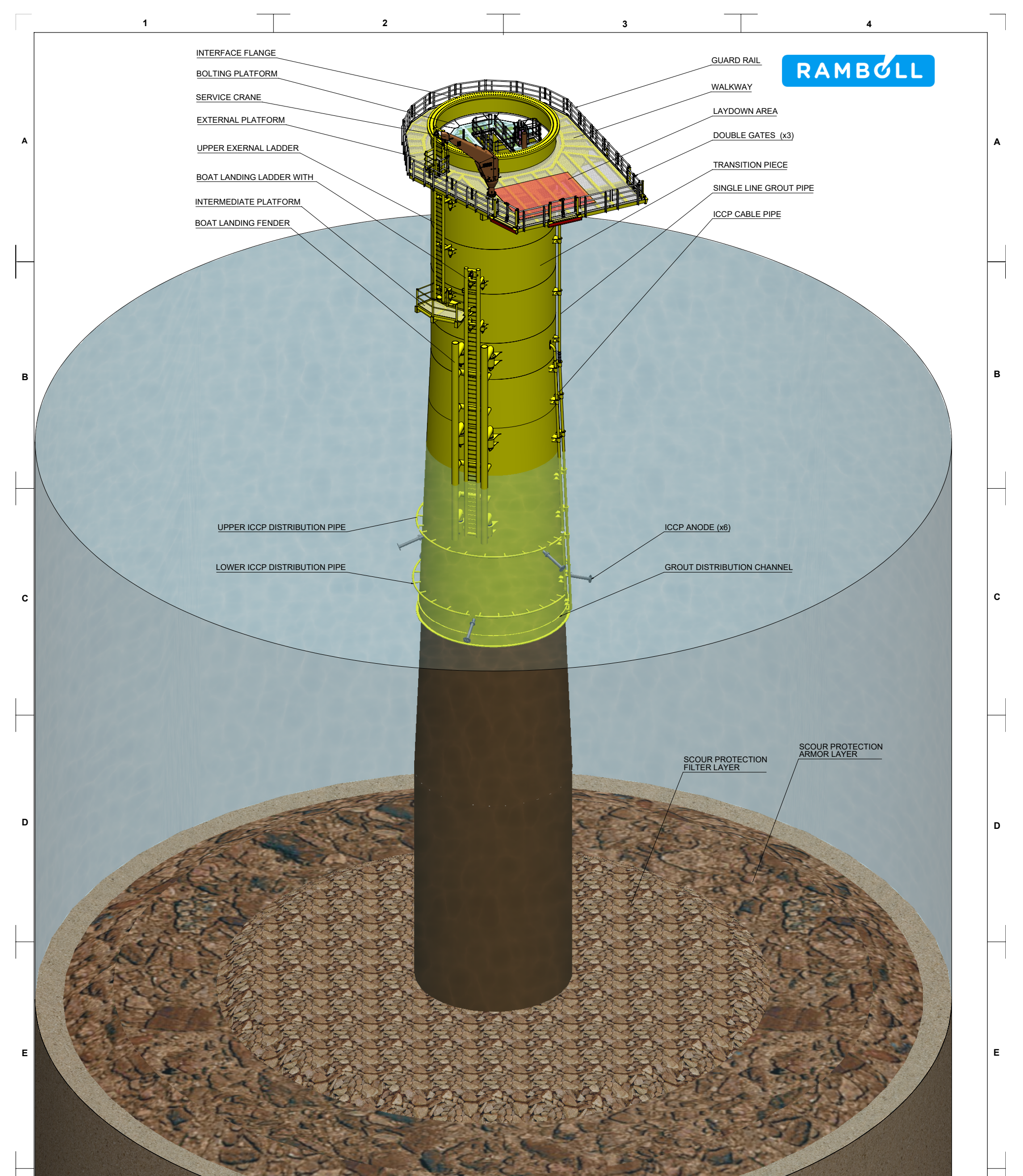
- A piled jacket foundation would be used to support the offshore substations.
- Construction and installation of the offshore substation topside would take place following the construction and installation of the piled jacket foundation.
- After the offshore substation topside is brought to the site, the topside would be lifted and placed on the foundation via a crane on a floating HLV or floating crane vessel. The topside would then be welded or grouted to the foundation.

## Cable Laying

- The target cable burial depth is 4 to 6 feet.
- Cable installation methods would include jet trenching, chain cutting, trench former, hydroplow, mechanical plowing, pre-trenching, mechanical trenching, and/or other available technologies.
- A narrow temporary trench would be created, into which the cable is fed while the equipment is towed along the seabed. The cable burial equipment rests on skids or wheels.
- The final installation methods and target burial depths would be determined by the final engineering design.



Offshore Wind Turbine Installation



Illustrative Example of the WTG Foundation