CONSTRUCTION METHOD FOR CCSP AND REVETMENT

ABIPRAYA
Description:
- Structure Type Segmental (@ 18m)
- Work of CCSP is connection with Revetment work ➔ Finished of CCSP will continue with Revetment Work
- Construction;
  ✓ Based of The drawing, Work site divide to 2 side of River. North River (left side) and South River (Right side).
  ✓ For this Construction, Contractor will construction this work by some Group of Works
  ✓ Base of Equipments to Construction this Work and access road;
Notes;

**Stage 1:**
- Site Condition → Almost there is no Access Road
- Almost, Construction will be Constructed Via River (on Pontoon)
- on some location, If work site can be reach by access road, Construction will be constructed from Land

**Stage 2:**
- Site Condition → Almost there is Access Road
- Almost, Construction will be Constructed from Land
- on some location, If work site can,t be reach by access road, Construction will be constructed from River (on Pontoon)
- Work group from Construction of Stage 1 (Construction had been finished), will be mobilization to construction on Stage 2 location

All construction will be constructed From Up stream (Hulu) into Down Stream (Hilir)
Construction Method for CCSP (Corrugated Concrete sheet Pile)

Refer to Tender Document, Work Stage / Construction Plan will be Constructed as bellowing Drawing

- Excavation For Structure
- Temporary Embankment for Construction Yard
- Temporary Cofferdam (sand Bag)

Driving of CCSP Via River by Pontoon (if construction can’t be constructed from Land)

- Driving for CCSP
Driving of CCSP from land
Corrugated Concrete Sheet Pile

Excavation of Temporary Embankment for replacing Borrow embankment & Geotextile

Placing geotextile and Embankment of Borrow material
Cut Top Pile

Anchor
Reinforcing of Capping Beam and Partition Wall
Form work of Capping Beam and Partition Wall

Concreting of Capping Beam and Partition Wall
Works on Excavation (there is no Temporary embankment, at Construction period not need Cofferdam and Temporary Embankment)
- Next Back fill with Borrow Material (bottom cyclope)
- Lean Concrete
- Cyclope Concrete
- Back fill and embankment with Borrow Material for Revetment
Construction Method for Revetment

- Gravel Bending
- Base Concrete

Top Concrete Frame
- Reinforcing
- Form work
- Concreting
Back Fill with Borrow material

Placing for Concrete Block 3x30x10 K. 175 and Closing concrete
Embankment For Dike
Construction of River Revetment is Segmental with @ 18 m Jointing / Construction Joint for one Segmental Revetment with each other by Joint Filler (elastic Material) as according to the Drawing.
Construction by Segmental (@ 18 m)
- Construction will be Constructed by Continue, Mean that when work CCSP up to @18 m, the next construction should be done.

Illustration;

Stage 1
- CCSP Work

Stage 2
- CCSP Work
- Capping Beam and other Work

Stage 3
- CCSP Work
- Capping Beam and other Work
- Cyclope

Stage 4 and soon
- CCSP Work
- Capping Beam and other Work
- Cyclope
- Revetment and other work
Detail Construction Of CCSP Work

Assumption:
1. Work by Heavy Equipment (Machinery)
2. Location : As according to the drawing
3. Material CCSP with Water Jet System and Have no water jet System

Description

1. **Site Work Preparation**
   - Work site made with good level that a Crane can stand up goodly
   - Crane stand up above plate of form which in the form of steel plate 1,5 x 6 meter.

2. **Stake point of Pilling**
   - Stake point of pilling of Concrete Corrugated Sheet Pile is executed by surveyor which is approved / agreed by Consultant Supervisor

3. **Fabrication of Material Steel sheet pile**
   - Fabrication / manufacturing of Concrete sheet pile is formed after the drawing has been approved by Consultant supervisor.
   - Delivery to work site

4. **Pilling**
   - Excavation by labor to get form of pilling
   - Made of guide beam on pilling position using steel material WF type with elevation distance from sub grade 1 to 2 meter, before pilling is executed
   - Guide beam is made with strength enough that can supporting of moment when pilling is executed and stabilise
   - Piling founded by vertical and monitored with measuring instrument (Theodolite) and yarn in 2 direction which each other vertical
   - Before pilling, pile with Vibro hammer have to in position of sentries
   - Concrete Sheet pile is vibrated by Vibro hammer is and the Sheet pile will be pilled into ground cause of gravitation moment and weight of Sheet pile it self and also helped by Water Jet Pump that spraying water, that mean this construction to easily and also helped by Water Jet Pump that spraying water which is intended to soften of soil easier Pilling process
   - Vibratory is executed as sequence.
   - At pilling time, between one of Steel Sheet pile and each other of side (has been pilled) if there is gap, can be near by trek beam.
   - Pilling is executed until a Sheet pile reach deepness elevation plan as according to the drawing.
Construction CCSP by Water Jet System

- Water Jet Pump that spraying water, that mean this construction to easly andalso helped by WaterJetPump thatspraying waterwhichis intende tosoften of soil easi Pilling process.
At determined location, Sheet pile will be strength with Anchor

Description;
- Finished Sheet pile, at location where sheet pile/anchor will be installed in pit/hole sheet pile that has been provided (pit / boring by ConcreteDrill)

- Material of TieRod Steel D32 (coating with grease) inserted into hole. At the end of threaded TieRod, Bolt was given and CNP (as according to the drawing). Next bolt in will be installed with tied.

- Other side of sheet pile, will be installed of Tie rod with same as sequence work.

- Next, Both of end tie rod will be united/connected by "Turnbuckle", Thisturnbucklebeside as connecting, as fasteners to (beside a bolt on sheet pile itself). After Tie rod installed and tension/tightness obtained by Caping Beam as according to the drawing.

- Continue with construction on Tie rod that cross section as according to the Drawing (Sand embankment, lean concrete and Cyclope concrete)

**Detail of Caping Beam**

<table>
<thead>
<tr>
<th>Caping Beam</th>
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<tbody>
<tr>
<td>- Reinforcing Steel</td>
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<tr>
<td>- Form Work</td>
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</table>
- Concreting as according to the drawing and technical specification