

New Sotra Bridge Navigation Closure - Plan



Communication Procedure

- **Official Procedure for Communication**

1. T-Notification : 1 month in advance
2. 1 Month Notification : Weekly Work
3. 3 days in advance : Actual Work of Date

- **Public Communication for Related Parties**

1. Update the work plan in SLCJV's Web Site
2. Information linked to SLCJV's Web Site information (Address : <https://sotralink.no/sotraleden/>)

- **Formal Communication's Responsibility**

1. SLCJV New Sotra Bridge Construction Team → Communication Team and Permit Team for work information
2. Communication Team and Permit Team → Official Notice and Public Communication

Activity upcoming

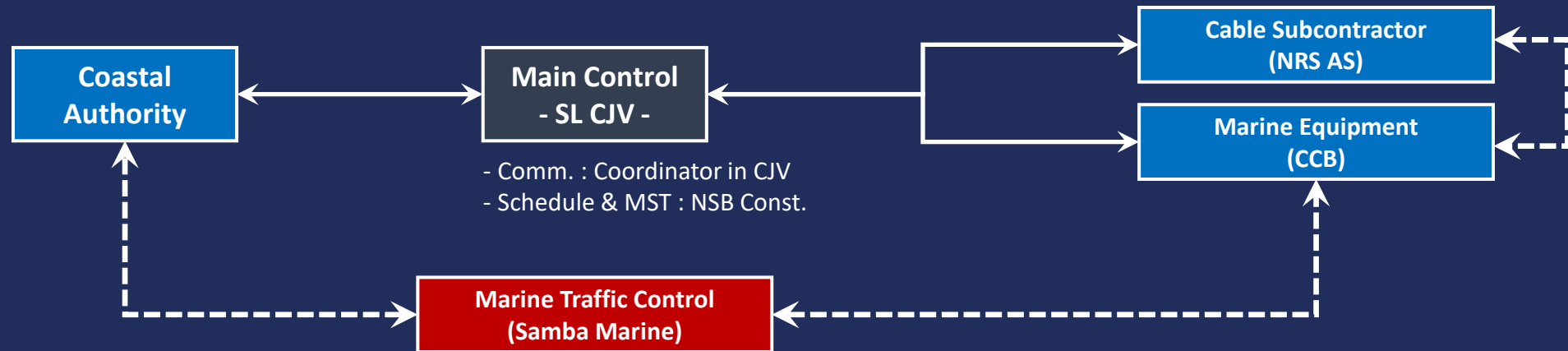
1. Hauling Rope Installation
2. Catwalk Rope Installation

Activity upcoming – Hauling Rope

1. Detail Communication Structure for work
2. Detail Schedule of Work
3. Detail Layout of Navigation for Work
4. Vessel Information for Work

Activity upcoming – Hauling Rope

1. Detail Communication Structure for work



- ✓ Before the operation for hauling rope installation, CJV will coordinate related stakeholders and set up the process.
- ✓ During the operation for hauling rope installation, CJV and Cable subcontractor will coordinate the operation according to the process.
- ✓ During the operation, Cable subcontractor will control the start of the marine operation. The vessels will follow the order from cable subcontractor according to the process.
- ✓ Marine traffic control should manage the notice on each division before and during the operation.

Activity upcoming – Hauling Rope

2. Detail Schedule of Work

- ✓ Total Duration : 2 days for Execution + 1 day for Extra, detail schedule will be updated.
- ✓ Below detail schedule per a working day : All steps for execution will be controlled by the cable subcontractor.
- ✓ Before the decision of operation, the execution scenario will be discussed and coordinated with marine operators.

Red Timeline : Permitted hours for Closure

| Description: working hours (07-16) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Note |
|--|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
| Set position of equipment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation Check – Anchorage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation Check – Pylon | | | | | | | | | | | | | | | | | | | | | | | | | |
| Barge Arrangement at Pylon | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hauling Rope Arrangement on Barge - KN and DR | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sea crossing of Hauling Rope (Including the connection) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fixation of Hauling Rope (Drotningsvik) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insertion of Rope into Guide roller | | | | | | | | | | | | | | | | | | | | | | | | | |

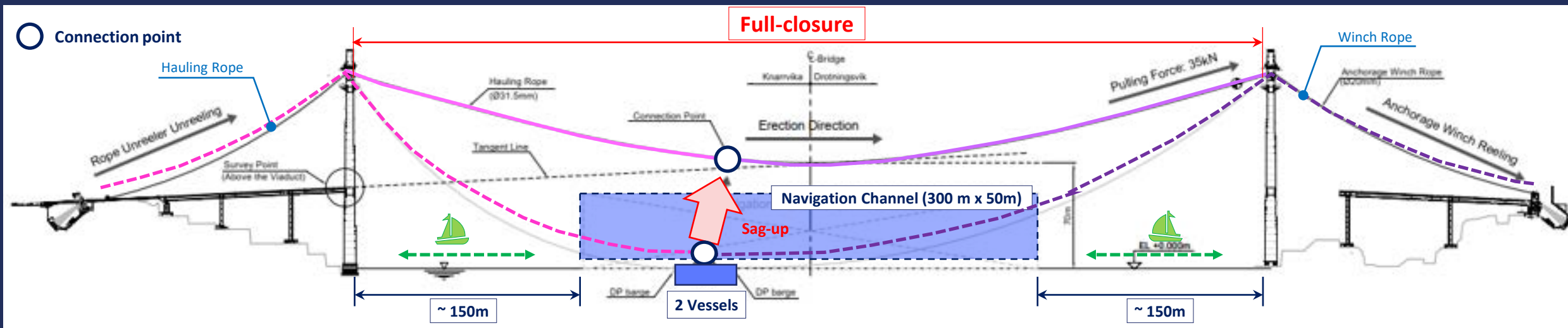
During preparation, DP barge is required to be stable because it has the crane operation.

Main operation with DP barge

Connection work - Related to the safety

Activity upcoming – Hauling Rope

3. Detail Layout of Navigation for Work

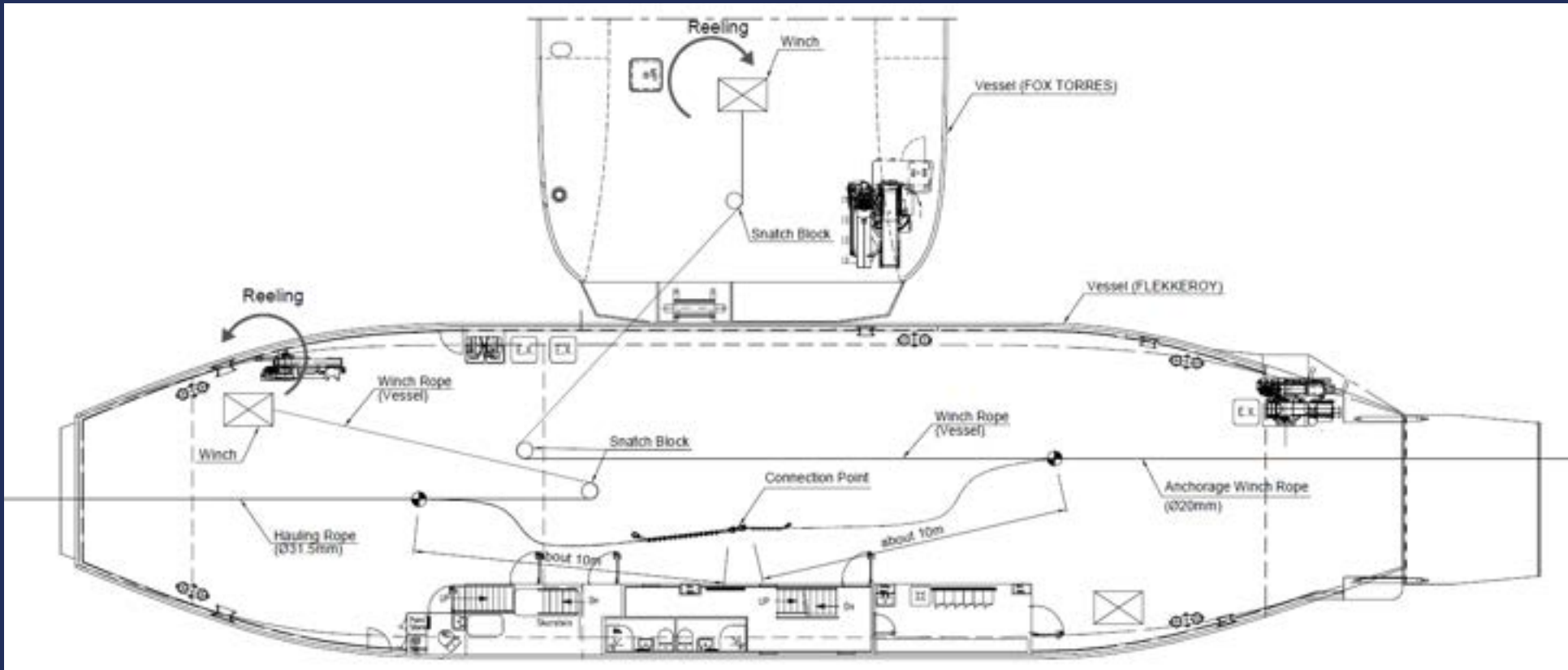


- ✓ The navigation channel : 300m, width x 50m, height
- ✓ When we shift the end of ropes from the ground to the vessel, the navigation channel should be controlled because the vessel should be stable with the barge crane operation.
- ✓ Before starting the sailing of vessels on the sea, the navigation channel closure will crosscheck the sea condition for full-closure once again.
- ✓ When the hauling rope is connected with the winch rope on the center, escaping the vessels will be controlled on the vessel according to the progress on site.
- ✓ The navigation channel should be controlled until the connection or the fixation on DR anchorage site.

Activity upcoming – Hauling Rope

4. Vessel Information for Work

- ✓ 2 Vessels will be positioned on middle of tower (Pylon) as below

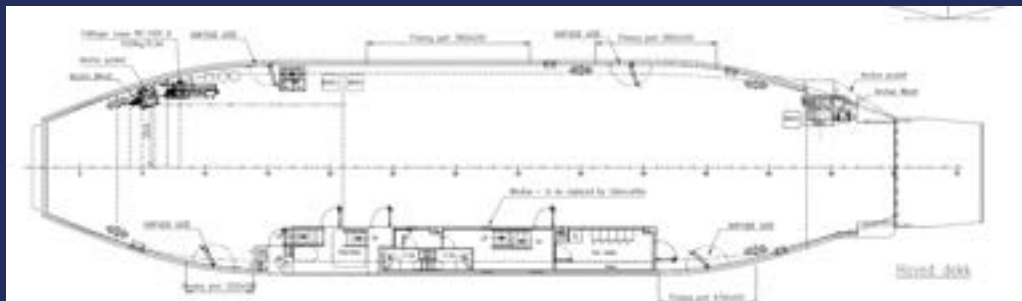
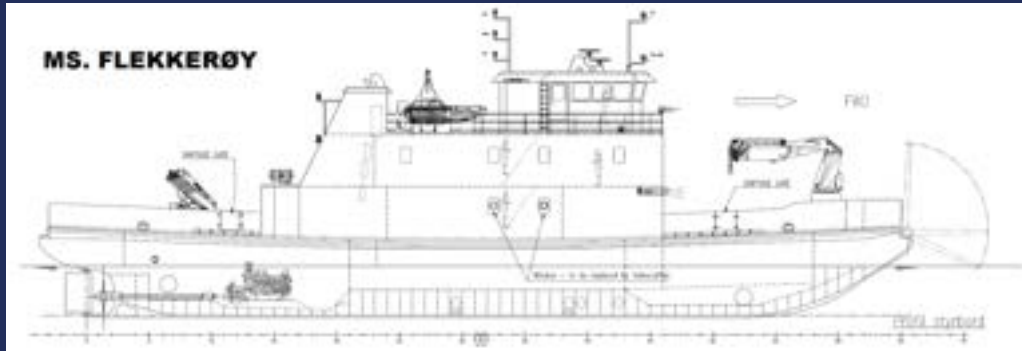


Activity upcoming – Hauling Rope

4. Vessel Information for Work

Vessel #1

| HOVED DIMENSJONER: | |
|------------------------|----------------|
| L.o.a. | 41,80 m |
| L.p.p. | 36,00 m |
| Bredde på spant | 9,00 m |
| Største bredde k. dekk | 10,30 m |
| Dybde i ris | 3,30 m |
| Spantavstand | 0,60 m |
| Debvekt | -100 t |
| Døglende laster | 2,568 m |
| Service fart | 10,5 knop |
| Fartsområde | Liten Kystfart |

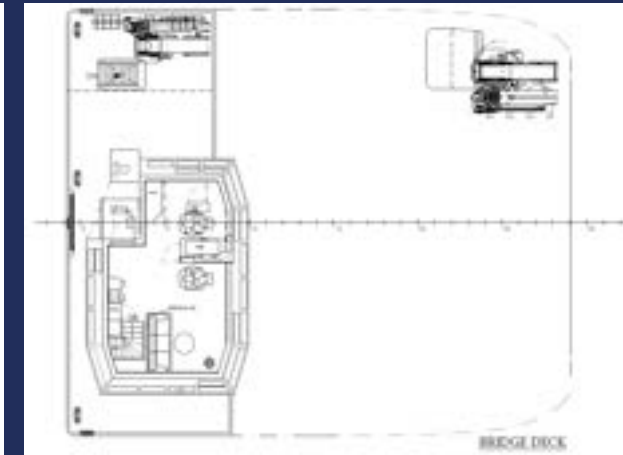
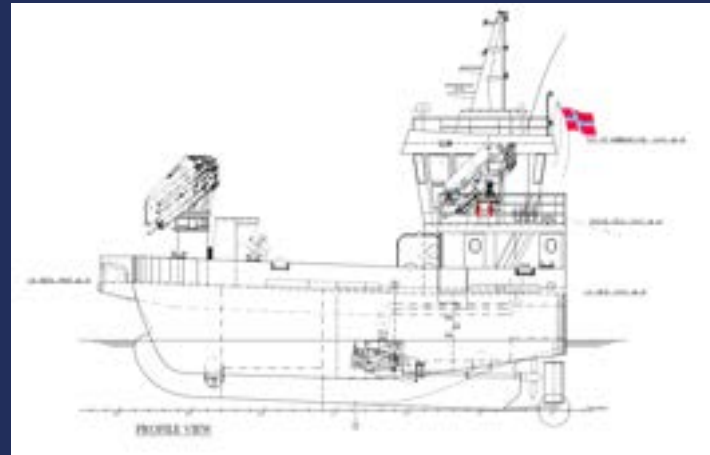


Vessel #2

PRINCIPAL PARTICULARS

| | |
|--------------------|---------|
| LENGTH OVER ALL: | 14.95 M |
| WIDTH: | 12.60 M |
| DEPTH TO 1st DECK: | 4.00 M |
| FRAME SPACING: | 0.50 M |

MS FOX TØRRES



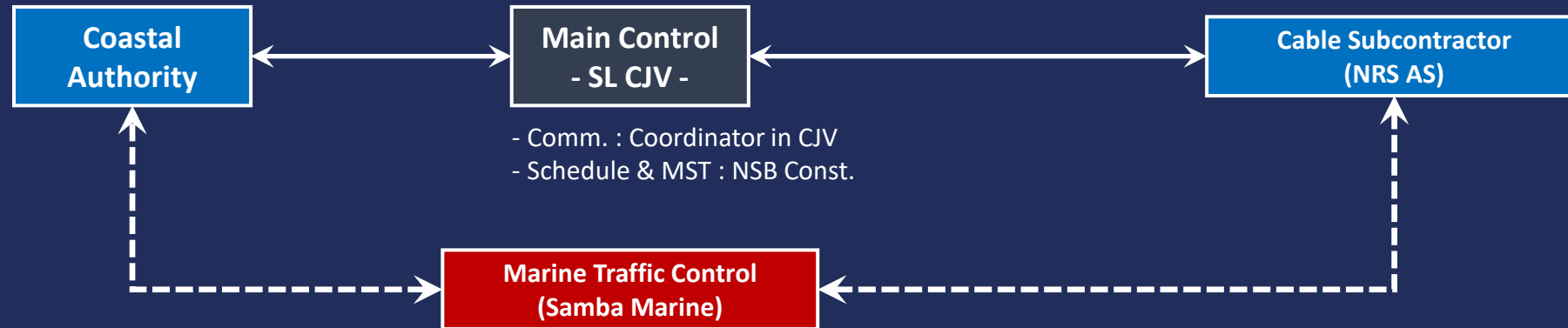
✓ Tug will be selected soon.

Activity upcoming – Catwalk Rope

1. Detail Communication Structure for work
2. Detail Schedule of Work
3. Detail Layout of Navigation for Work

Activity upcoming – Hauling Rope

1. Detail Communication Structure for work



- ✓ Before the operation for catwalk rope installation, CJV will coordinate related stakeholders and set up the process.
- ✓ During the operation for catwalk rope installation, CJV and Cable subcontractor will coordinate the operation according to the process.
- ✓ During the operation, Cable subcontractor will inform the progress for the navigation channel control.
- ✓ Marine traffic control should manage the notice on each division before and during the operation.

Activity upcoming – Catwalk Rope

2. Detail Schedule of Work

- ✓ Total number of Catwalk Rope : 16 EA (South : 8 EA / North : 8 EA) → Total Duration : 10 working days
- ✓ The first is required for full closing : update Risk with actual check. Then, the remaining rope will be done with Partial Closure

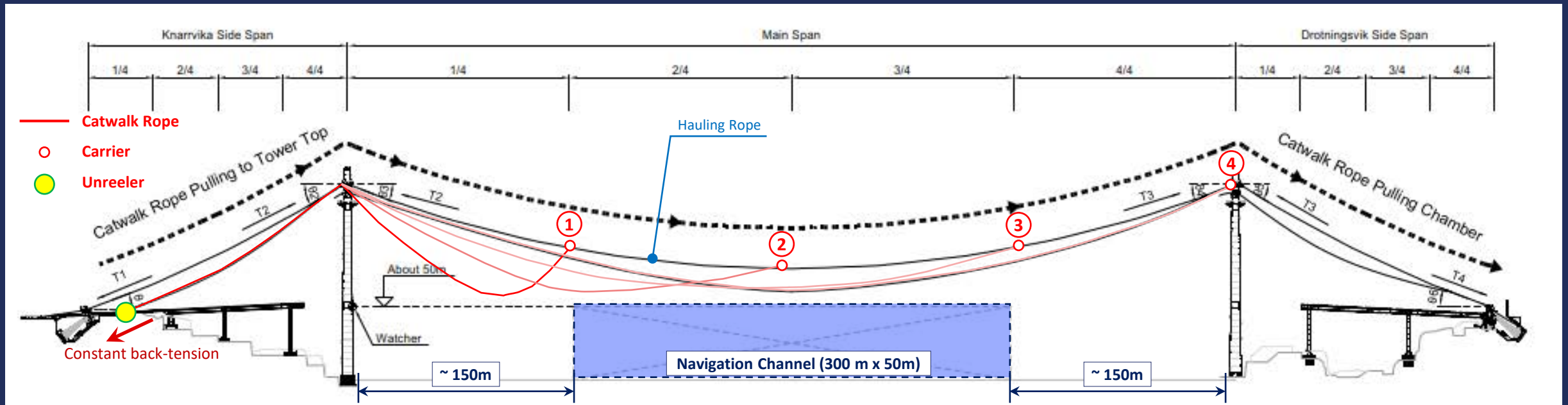
Red Timeline : Permitted hours for Closure (Two Times)

| Description: work hours | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Note | |
|--|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|--|
| Set position of equipment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation Check – Anchorage | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation Check – Pylon | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Catwalk Rope Installation (1 st in a day) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finalization of Catwalk Rope Shift (Drotningsvik) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Anchoring | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Catwalk Rope Installation (2 nd in a day) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finalization of Catwalk Rope Shift (Drotningsvik) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Anchoring | | | | | | | | | | | | | | | | | | | | | | | | | | |

For No.1, the navigation channel will be close to assess the risk.

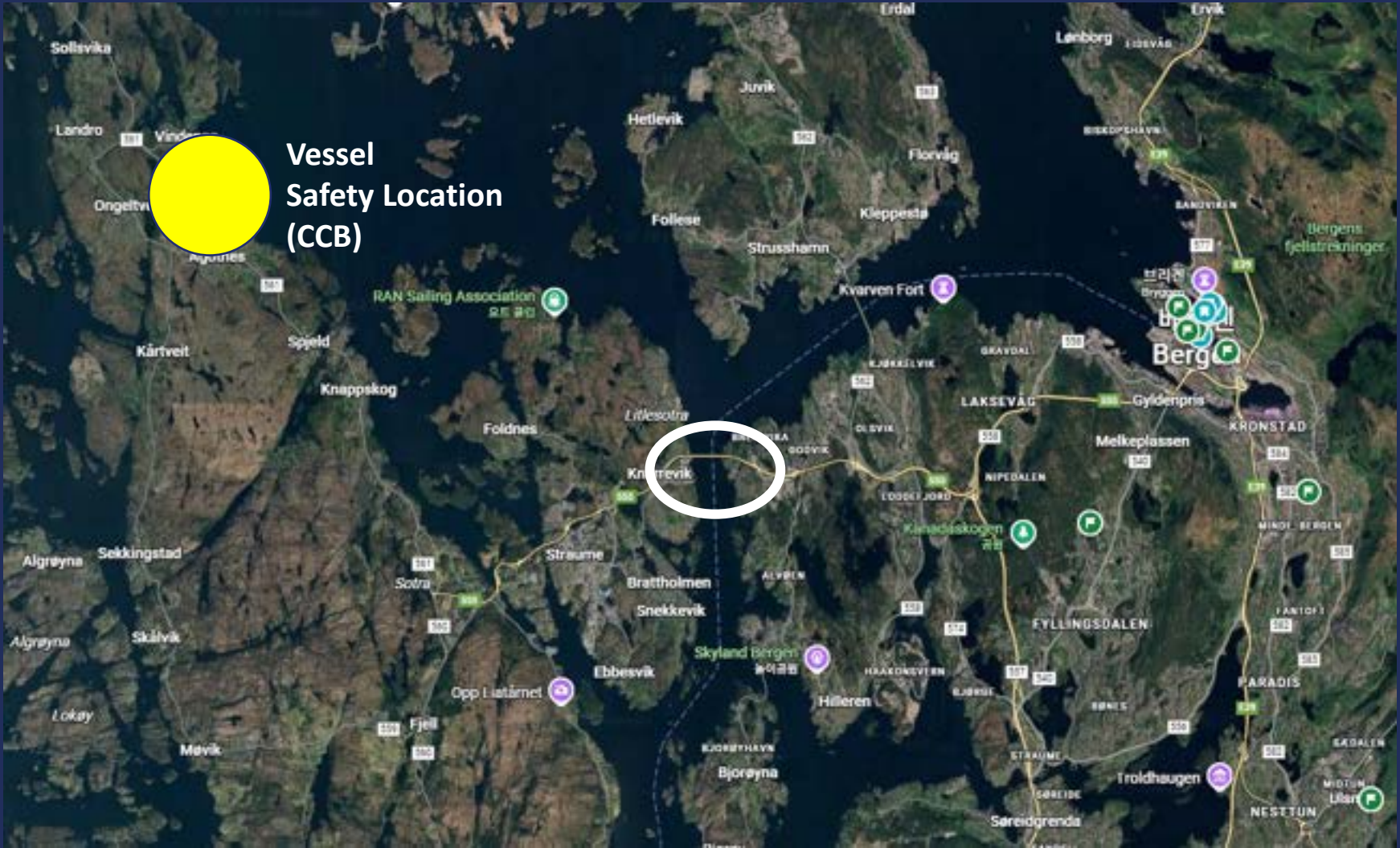
Activity upcoming – Catwalk Rope

3. Detail Layout of Navigation for Work



- ✓ The navigation channel : 300m, width x 50m, height
- ✓ Basically, the sag (the lowest point) of catwalk rope during erection will be controlled by the back-tension on the powered unreeler constantly.
- ✓ According to the carrier location during catwalk rope erection, the opening of navigation channel can be controlled on the opposite site.
- ✓ For No.1 catwalk rope, CJV has considered the full-closure to assess all risk during rope erection according to the detail schedule.

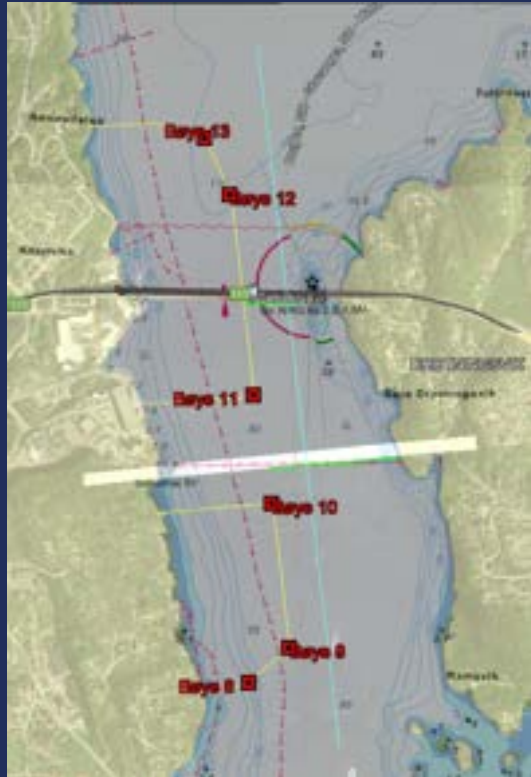
Steel Deck Installation – Vessel Location



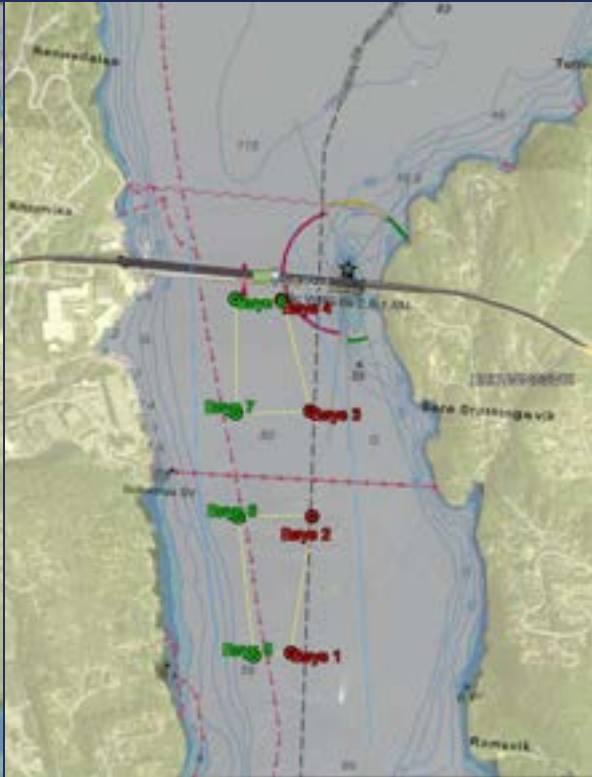
Vessel Anchor Point
- CCB port

Partial Closure - Method

West side
Partial closing



Central part
Partial closing



East side Partial
closing



Full Closure – Guard Boat for Closing

Partial Closure

Using Buoys → Guard Boat for Partial Closing