

## Important Information on Installation of Stirring Block Reef

In relation to the project, "Wide Area Fishing Ground Environmental Development", Osaka Prefectural Government, the main body of the project, is scheduled to install "Stirring Block Reefs (consists of Stirring Block, Sea Mark Reef FHB2.0m type and Karusera Reef 35SS type)" as follows. We apologize to the ships sailing in the vicinity of the installation areas for causing any inconvenience during the installation works and we would like to ask for your cooperation for safe navigation. Please also note that the clearances between the top of each block and the sea surface will be approximately 12.3 meters to 12.5 meters after the installation.

1. Name of Installation Work: Installation Works for Wide Area Fishing Ground Environmental Development in Osaka Bay, Phase 4
2. Work Period: From August 11 to August 23, 2017 (Reserved Date: From August 24 to August 31, 2017)

Note: Actual installation work takes 1 or 2 days. In case of stormy weather, installation activities will be postponed.

3. Installation Period: Permanently installed starting from August 11, 2017
4. Ordered by: Osaka Prefectural Government

For Inquiries:

- 1) Fisheries Division, Department of Environment, Agriculture, Forestry and Fisheries  
Osaka Prefectural Government  
TEL 06-6210-9612

- 2) Osaka Port Authority Hannan Harbor Office Construction Division  
TEL 072-439-5261

5. Installer/Builder: Hannan civil engineering Co., Ltd TEL 072-482-2830

6. Installation Location: Off the coast of Kishiwada City, Osaka Prefecture  
(Water Depth: Approximately 14.5 meters) as shown in Figure 1.

Stirring Block Reefs (Stirring Block, Sea Mark Reef FHB2.0m type and Karusera Reef 35SS type) produced/prepared in the Hannan Port 3rd District (in the Food Industrial Complex site) will be transferred to each stirring block reef installation location by a crane vessel. And each Stirring Block Reef will be placed as shown in Figures 3 and 4. (within each square area, 100 meters on a side marked ①, ②, ③ and ④ points and with #⑤ point as its center)

Figure 1

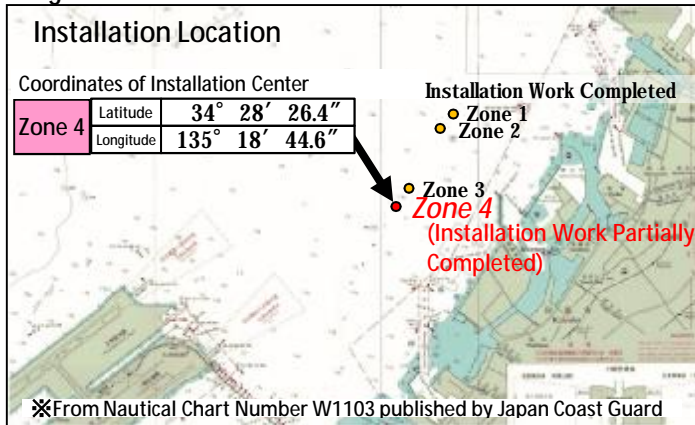


Figure 2

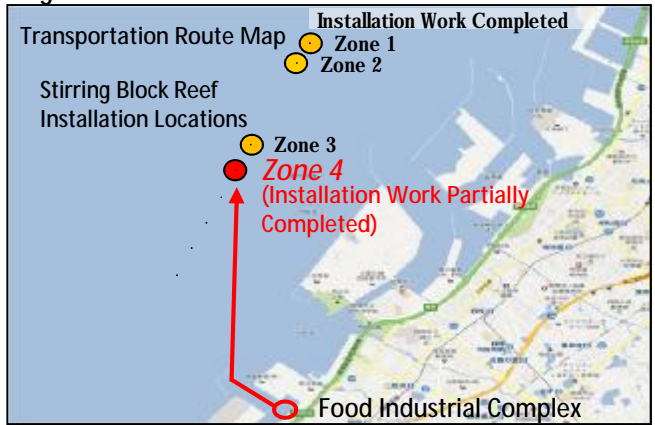


Figure 3

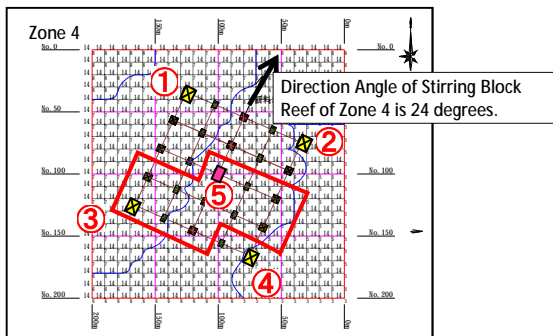
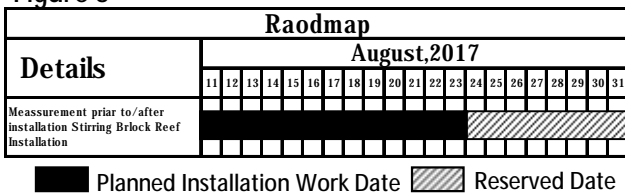


Figure 4 Zone 4 Installation Work Area Layout Table

	Zone 4 Latitude and Longitude					
	Northern Latitude			East Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
①	34	28	28.5	135	18	46.4
②	34	28	27.2	135	18	47.3
③	34	28	25.6	135	18	42.1
④	34	28	24.3	135	18	45.6
⑤ Center	34	28	26.4	135	18	44.6

Figure 5



### 【Outline of Stirring Block Reef】

- Stirring Block (6.0m length x 4.0m x width x 2.2m height) 4 reefs are installed
  - ⊠ Sea Mark Reef FHB2.0m type (5.6m length x 5.6m width x 2.0m height) 4 reefs are installed
  - Karusera Reef 35SS type (6.0m length x 6.0m width x 2.0m height) 3 reefs are installed
- 11 reefs all in all

Figure 6

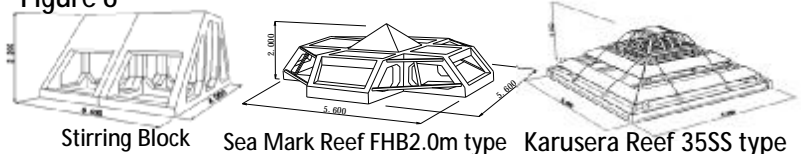
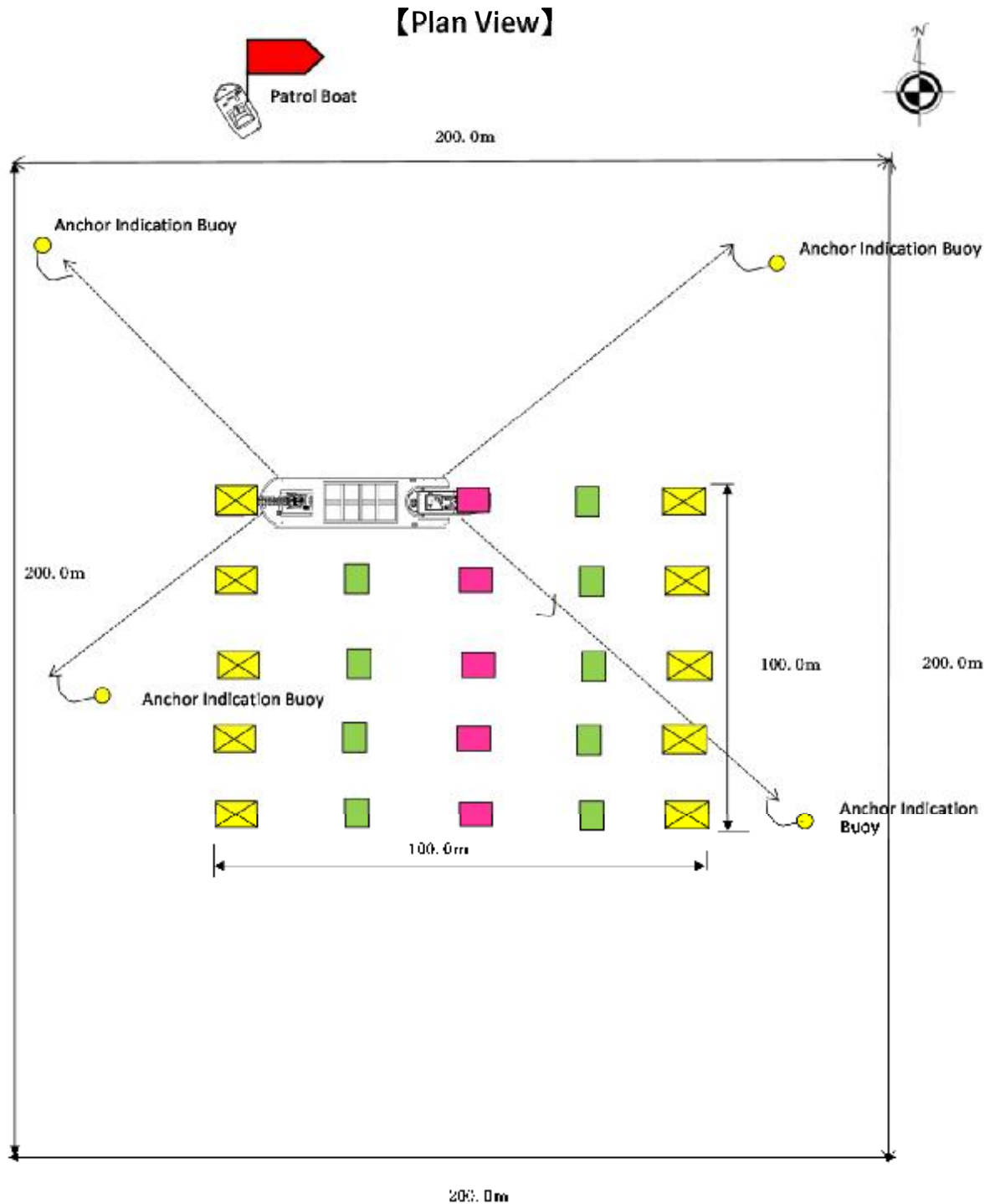


Figure 7 : Installation Status Chart



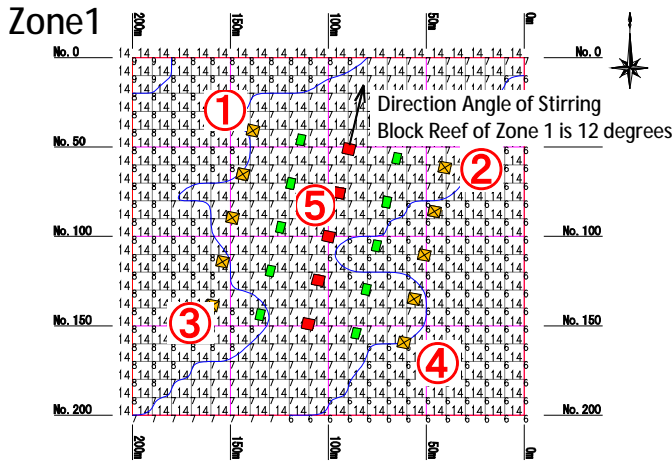
### Safety Measures

1. A patrol boat will be deployed during the installation.
2. While divers are in operation, the vessel for divers identifies that divers are in operation by hoisting "Flag Alfa" (international maritime signal flags) to remind the ships sailing the vicinity.
3. Buoys indicating anchor locations will be deployed to indicate the locations of crane vessel's anchors.
4. Security in working areas will be assured by keeping a good watch. In case that the installation becomes an obstacle for any other vessels sailing in the vicinity, the anchor ropes will be eased or the anchor ropes and anchors will be moved.

# Latitude and Longitude of Zone where installation work is completed

In fiscal 2014 to 2016, starting block reefs were installed in Zone 1 to 3 as shown below.

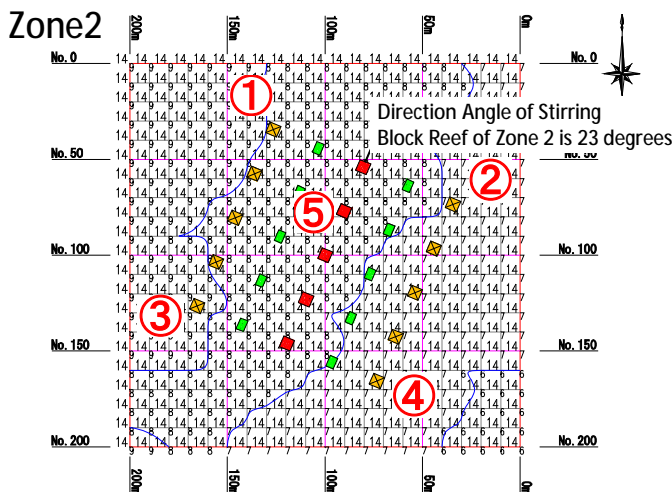
Figure 8



Zone 1 Installation Work Area Layout Table

	Zone 1 Latitude and Longitude					
	Northern Latitude			East Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
①	34	29	43.9	135	19	33.9
②	34	29	43.3	135	19	37.7
③	34	29	40.7	135	19	33.1
④	34	29	40.1	135	19	36.9
⑤ Center	34	29	42.0	135	19	35.4

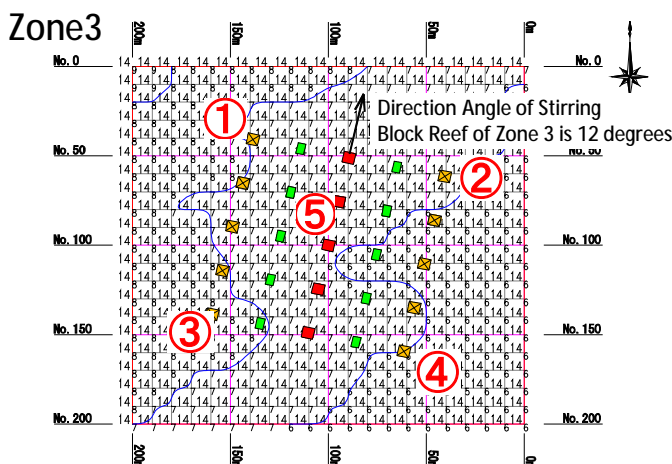
Installation time: March 2015



Zone 2 Installation Work Area Layout Table

	Zone 2 Latitude and Longitude					
	Northern Latitude			East Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
①	34	29	32.1	135	19	25.3
②	34	29	30.9	135	19	29.0
③	34	29	29.1	135	19	23.8
④	34	29	27.9	135	19	27.5
⑤ Center	34	29	30.0	135	19	26.4

Installation time: March 2015, January 2016



Zone 3 Installation Work Area Layout Table

	Zone 3 Latitude and Longitude					
	Northern Latitude			East Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
①	34	28	43.9	135	18	53.7
②	34	28	43.3	135	18	57.5
③	34	28	40.7	135	18	52.9
④	34	28	40.1	135	18	56.7
⑤ Center	34	28	42.0	135	18	55.2

Installation time: January 2017