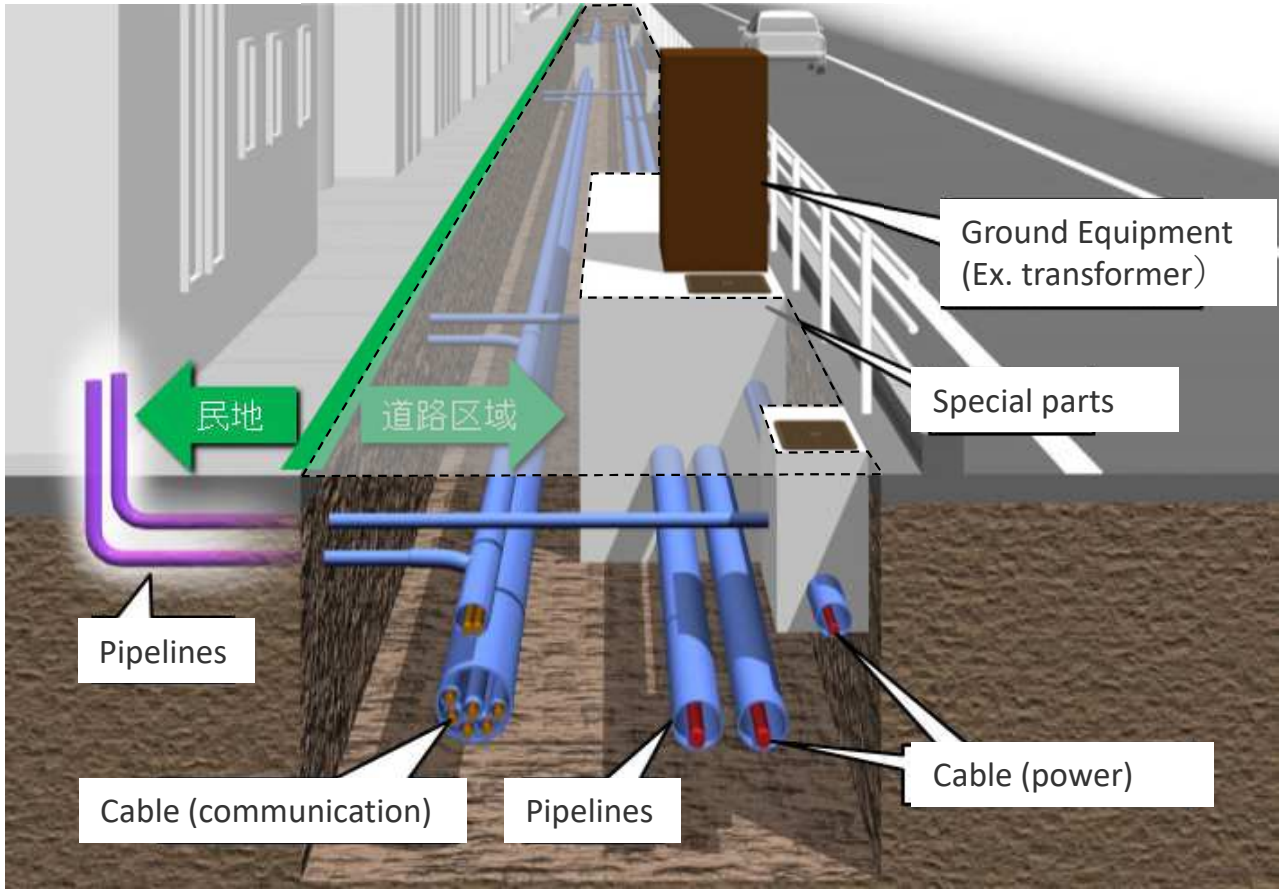
Electric Cable Common Ditch Maintenance Project in Miyako Jurisdiction

Miyako Civil Engineering Office,
Okinawa Prefecture

1． What is electric cable common ditch?

What is electric cable common ditch?

- A ditch that can accommodate electrical and communication cables in an underground space, mainly under sidewalks.
- Utility poles and cables can be removed from the ground by constructing a common cable ditch.



When a common electric cable ditch is maintained …

＜Effect of maintenance ①＞
Can prevent utility poles from collapsing due to typhoons, earthquakes, etc.
⇒ Can prevent power outages during disasters and secure passage routes for emergency vehicles

A utility pole collapsed by the typhoon (Tateyama City, Chiba Prefecture)
(Source: Ministry of Land, Infrastructure, Transport and Tourism))

When a common electric cable ditch is maintained …

＜ Effect of maintenance ②＞
The elimination of utility poles on the sidewalks will allow pedestrians to pass more comfortably.

Utility poles erected on narrow sidewalks (Source: Ministry of Land, Infrastructure, Transport and Tourism data))

When a common electric cable ditch is maintained …

＜ Effect of maintenance ③＞
The removal of utility poles, wires, etc. from the ground will restore a beautiful landscape.

2． Typhoon damage in Miyako Island region

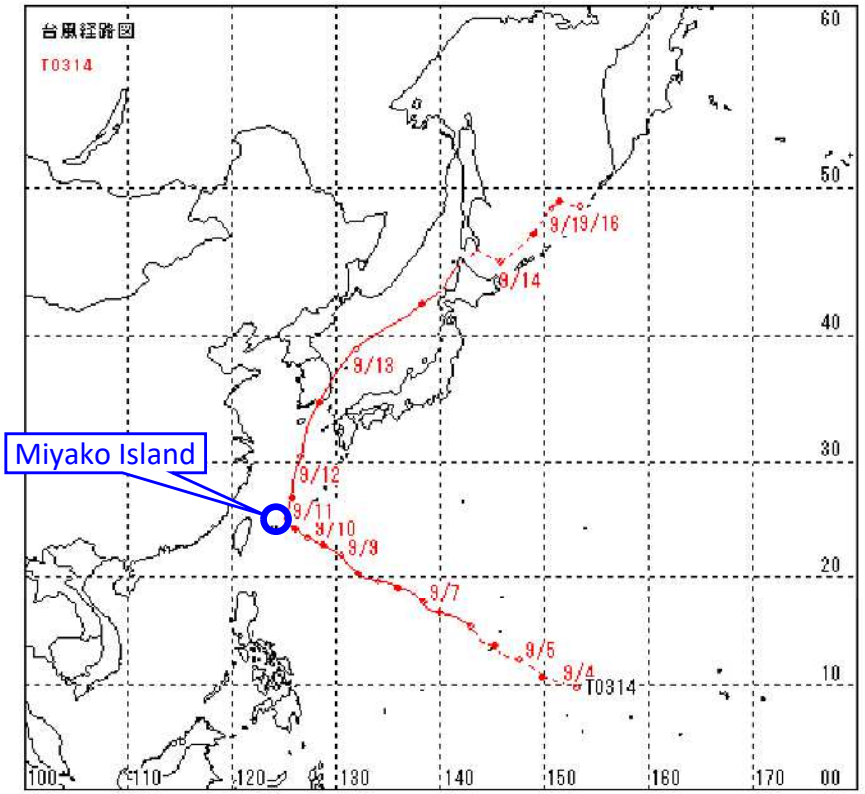
Typhoon damage in Miyako Island region

- Typhoons approach Okinawa Prefecture almost every year, causing damage.
- In September 2003, Typhoon No. 14 (Maemi), which had a maximum instantaneous wind speed of 74 m, approached the Miyako Island region and caused extensive damage.

宮古島地方への台風接近数

年		接近数
H15	2003	7
H16	2004	6
H17	2005	5
H18	2006	5
H19	2007	4
H20	2008	1
H21	2009	2
H22	2010	3
H23	2011	4
H24	2012	7
H25	2013	6

年		接近数
H26	2014	3
H27	2015	5
H28	2016	4
H29	2017	4
H30	2018	6
R1	2019	6
R2	2020	4
R3	2021	5
R4	2022	3
R5	2023	3
R6	2024	2



Typhoon No. 14 of 2003 - Route map

Damage caused by Typhoon No. 14 (Maemi in 2003)①

・Typhoon No. 14 (Maemi), which formed in September 2003, developed and moved towards Miyako Island, passing it over at around 5:00 on the 11th.
・In Miyako Island, the maximum wind speed was 38.4 m/s (maximum instantaneous wind speed 74.1 m/s) and the minimum pressure was 912.0 hPa (the fourth highest on record in the country).


Gusukube Junior High School Gymnasium


Nishihennazaki wind power generation facility

Damage caused by Typhoon No. 14 (Maemi in 2003)②

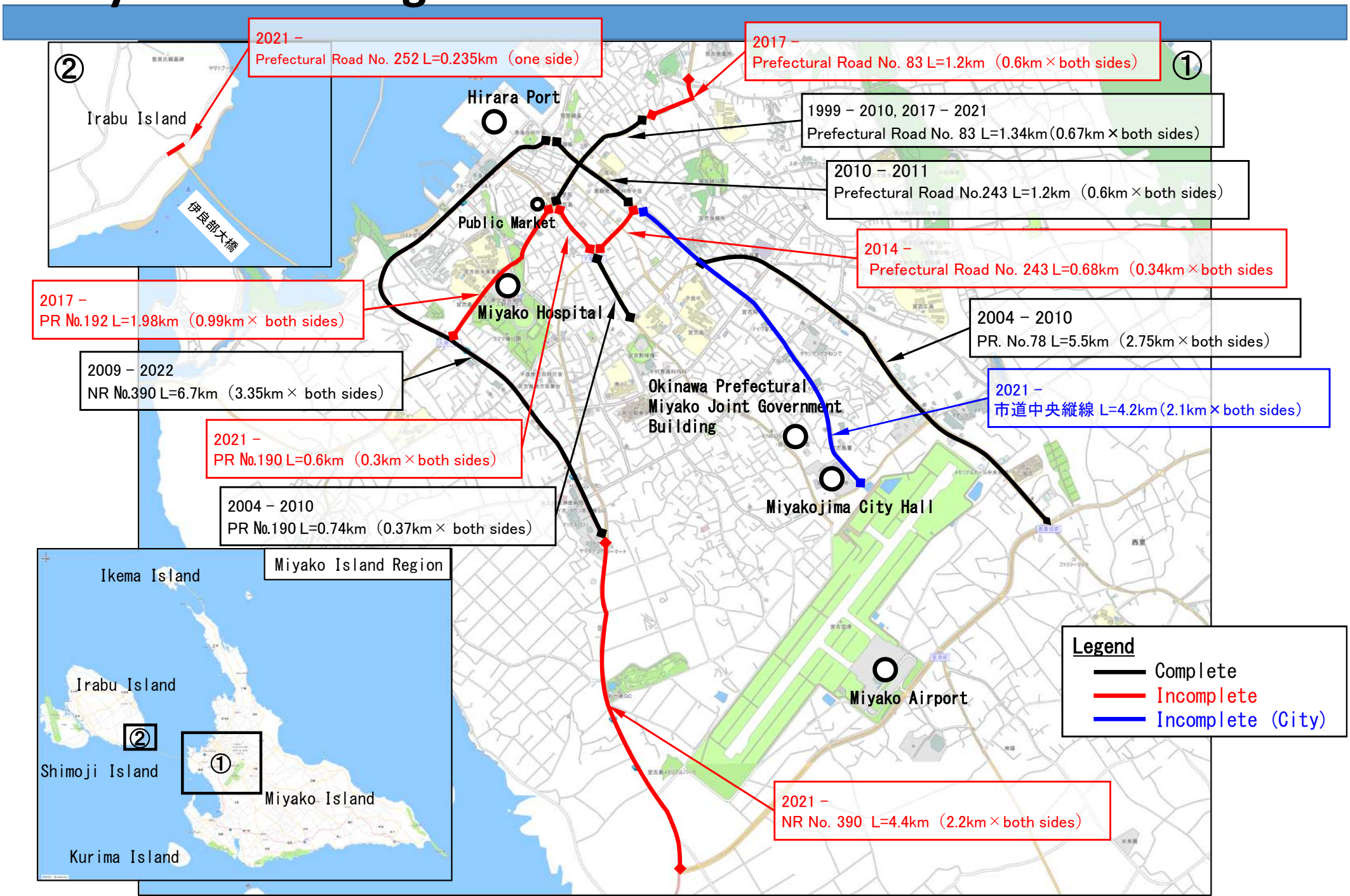
- The typhoon damaged approximately 1,900 utility poles, blocked roads and disrupted power, telephone, and water services in the Miyako Island region.

  [Damage] Water: 4,681 households (fully restored on 9/15)
  Telephone: 4,068 lines (fully restored on 9/28)
  Electricity: 21,400 households (fully restored on 9/23)

- This was a major impetus for the construction of common electrical cable ditch in the Miyako Island region.

3. Maintenance of electric cable common ditch in Miyako Island region

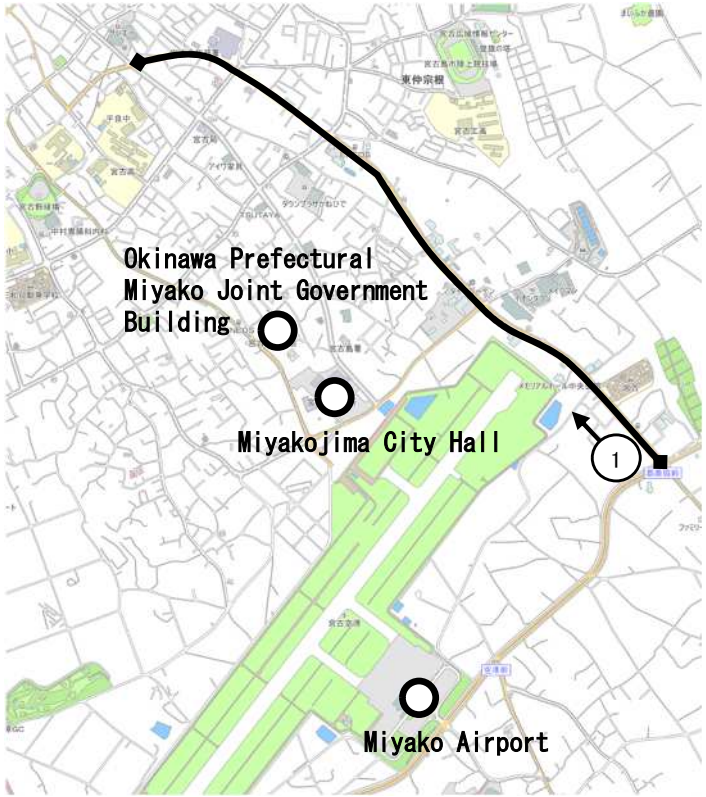
Maintenance plan of electric cable common ditch in Miyako Island region



Example of maintenance plan of electric cable common ditch in Miyako Island region (complete)

Prefectural Road No. 78 （Taira-Gusukube Line）

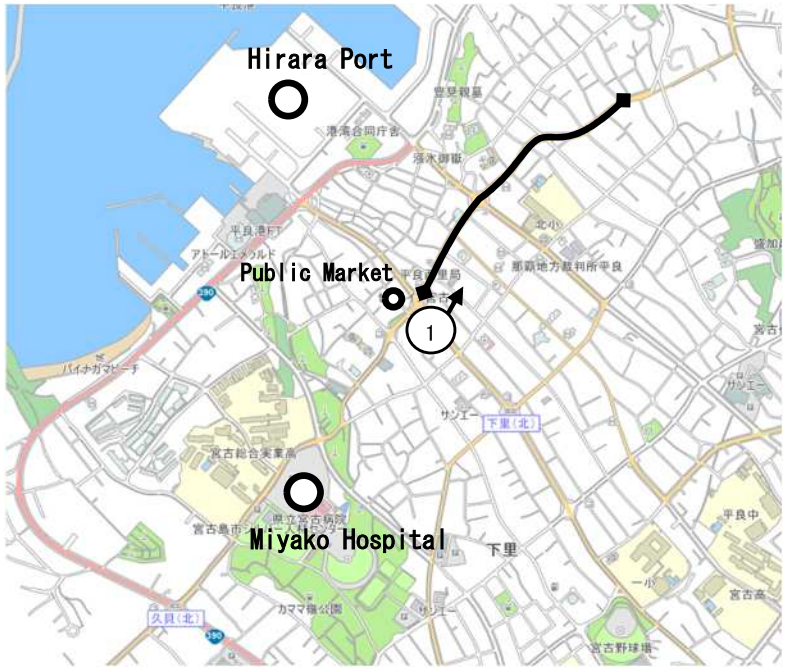
- Project period: FY2004-FY2010
- Project length: 5.5km（road extension 2.75 km x both sides）



Example of maintenance plan of electric cable common ditch in Miyako Island region (complete)

Prefectural Road No. 83 (Bora-Nishizato Line)

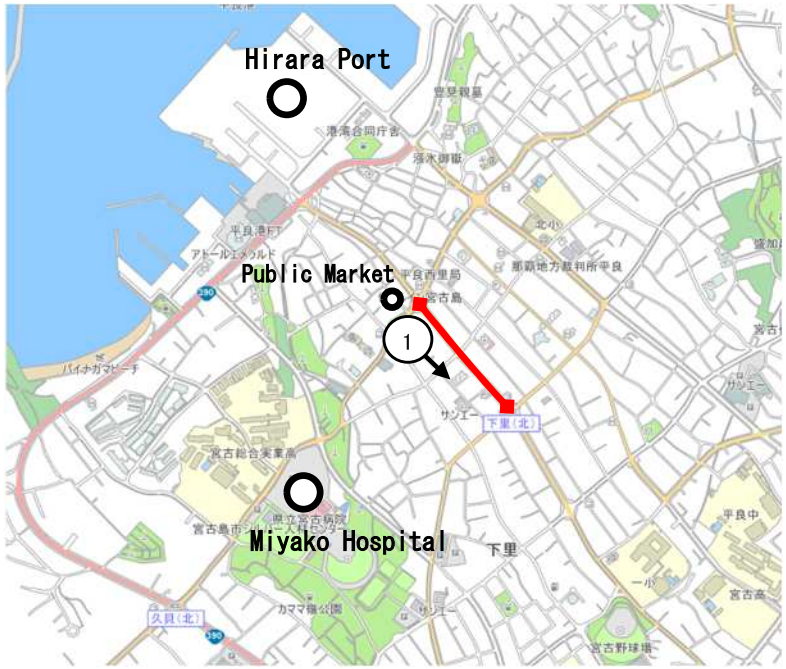
- Project period: FY1999 - FY2010
- Project length: 1.34 km (road extension 0.67 km x both sides)



Example of maintenance plan of electric cable common ditch in Miyako Island region (incomplete)

Prefectural Road No. 190 (Hirara-Arazato Line)

- Project period: FY2021 - *Construction starts in 2023
- Project length: 0.6 km (road extension 0.3 km x both sides)



Example of maintenance plan of electric cable common ditch in Miyako Island region (incomplete)

Prefectural Road No. 192 （Hirara-HisamatsuPort Line）

- Project period: FY2017 -
- Project length: 1.98 km (road extension 0.99 km x both sides)