STUDY TOUR GRANT (STG)

Japan Society of Civil Engineers (JSCE)

In coordination with

Philippine Institute for Civil Engineers (PICE)

2017 JSCE STG REPORT EXPERIENCE

Presented by: Engr. Al-Adzhar Puti Usman
ENGINEER I, SPMU-OSEC, DPWH-ARMM
ATENEO DE DAVAO UNIVERSITY
DAVAO CITY CHAPTER MEMBER

Japan Society of Civil Engineers (JSCE)

- Japan Society of Civil Engineers (JSCE) was established as an incorporated association in 1914 entrusted with the mission to contribute to the advancement of scientific culture by promoting the field of civil engineering and the expansion of civil engineering activities.
- Since its establishment, JSCE has endeavored to achieve the above mission, through extensive activities including scientific exchange among members, researchers / promotion of science and technologies relating to the field of civil engineering, social involvement, etc.
- Over the years, the JSCE membership has increased significantly from the initial 443 members to approximately 39,000 members at present, and is currently engaged in various wide-ranged activities around the world.

Japan Society of Civil Engineers (JSCE)

- With the birth of the 21st century, JSCE has reconfirmed its goals to exert perpetual efforts

- 1) To propose an idea for social infrastructure development in the future from civil engineers' perspective,
- 2) To acquire a steadfast relationship of mutual trust with the society,
- 3) To promote scientific and technological researches/studies with a high degree of transparency, and
- 4) To evaluate public works from a neutral standpoint, and to reach a social consensus on those proper standards

Events & Conferences

- JSCE Annual Meeting
- JSCE Study Tour Grant (STG)
- AOC's Annual Meeting
- International Conference
- Civil Engineering Conference in the Asian Region (CECAR)

Study Tour Grant (STG)

- JSCE Study Tour Grant (STG), supported by International Scientific Exchange Fund (ISEF), is a unique program for young civil engineers to learn Japanese civil engineering technology and projects.
- The STG program invites the civil engineering students who are nominated by the AOC societies to Japan to stay for about one week.
- During their stay, those students visit project sites and research institutes, meet leading civil engineering professionals and academics, and share their projects with other students.

Study Tour Grant (STG)

- At the end of the program they are requested to submit a report on their experience gained in Japan to JSCE and also to the AOC to which they belong home.
- This program gives a chance not only to see technological innovations, but also to experience them in the environment that they are achieved.

Implementation Guideline for JSCE Study Tour Grant

- (General Provisions) Article 1 The rules of the International Scientific Exchange Fund Committee of JSCE sets forth, under Article 3,
- Item 1, the programs for supporting global human resources development and academic exchange. This implementation guideline provides the basic items related to one of those programs, JSCE Study Tour Grant Program (hereinafter referred to as "STG").
- 2 When implementing STG, special attention shall be paid to the effectiveness and feasibility of STG as well as separation between the STG budget and the budget of JSCE headquarters. A close consideration shall also be given to the matters pointed out by the Management Committee on the Charitable Trust JSCE International Scientific Exchange Fund.
- 3 To prevent STG from becoming a dead letter, this guideline shall be reviewed once every three years.

Implementation Guideline for JSCE Study Tour Grant

- (STG Education Program) Article 2 The time required for the education program shall be about one week, during which the JSCE Annual Meeting (usually held in September) shall take place.
- 2 The education program comprises visits to project sites and research institutes, interview with leading civil engineering professionals and academics, delivery of presentation at the International Summer Symposium, and submission of a report on their experience gained in Japan to the AOC (Agreement of Cooperation) societies they belong home.
- 3 In the report on their experience gained in Japan to the AOC societies they belong home, the invitees shall be obligated to mention that they have been supported by the International Scientific Exchange Fund of JSCE.

Implementation Guideline for JSCE Study Tour Grant

- (Countries Subject to the Program and the Number of Invitees) Article 3 Linked with the JSCE international strategy, participants are invited from Myanmar, Indonesia, Vietnam, Mongolia, Turkey, the Philippines and Thailand; one participant from each country every year.
- 2 The countries subject to the STG program may be added to or deleted from the list by the discretion of the International Scientific Exchange Fund Committee (hereinafter referred to as "Committee") of JSCE.

Implementation Guideline for JSCE Study Tour Grant

- (Selection of Invitees) Article 4 The Committee shall ask the engineering societies with which JSCE has entered into cooperation agreements (hereinafter referred to as "Agreement of Cooperation") to recommend candidates for invitees.
- 2 The number of invitee candidates shall be about **five** for each country. The Committee asks the candidates in writing about their possibility of coming to Japan for study or finding a job in Japan, the place(s) at their home where they will deliver their experience gained in Japan, and so forth, and then finally selects one invitee from each country.
- 3 In selecting the invitees, the Committee asks for the cooperation of the International Communication and Collaboration Group leaders, international sections, etc. of the relevant countries. At this moment, the Committee should suggest a hope to let the invitees function as a means for establishing or vitalizing global network. - 2 –
- **4 Young engineers or students shall have higher priority as invitees.**

Implementation Guideline for JSCE Study Tour Grant

- (Cooperation to Invitees) Article 5 The Committee gives guidance to the invitees before and during their stay in Japan concerning their presentation materials, so that they can deliver properly at the International Summer Symposium.
- 2 When the invitees desire to have information about studying or getting a job in Japan, the Committee shall provide them with such information to the extent possible as an engineering society.
- 3 To the invitee who desires to come to Japan for studying, the Committee gives necessary cooperation, such as making a request to the educational institute where the invitee desires to study and providing an opportunity for interview when they come to Japan.
- 4 The secretariat in charge collects necessary information including the lists of names and mailing addresses of the invitees, names of and comments from the Committee members who gave guidance, and so forth, and builds an ongoing contact system.

Implementation Guideline for JSCE Study Tour Grant

- (Schedule for Selecting Invitees, etc.) Article 6 The Committee asks the Agreement of Cooperation to provide recommendation at the beginning of January every year, and receives a list of candidates in late March.
- By the end of May, the Committee selects one invitee from each country and notifies the selection results to the Agreement of Cooperation.
- In June or later, the Committee starts making clerical adjustment with the invitees. While carrying out works such as giving guidance for delivery of presentation at the International Summer Symposium, the Committee completes basic adjustments by the end of July, which is followed by fine adjustments that continue until the invitees are invited at the beginning of September.

Implementation Guideline for JSCE Study Tour Grant

- 2 With respect to recommendation from countries where no Agreement of Cooperation exists, the Committee asks recommendation at the meeting of the International Communication and Collaboration Group (which is scheduled to be held at a time between the end of February and the beginning of March). The schedule that follows is the same as stated above.

Implementation Guideline for JSCE Study Tour Grant

- (Others) Article 7 To adequately control the overall work schedule, the Committee holds a meeting at the earliest possible opportunity after the closing of the JSCE Annual Meeting in September. At this meeting, the Committee checks the implementation status of the current fiscal year, and starts preparation for the next fiscal year.

Implementation Guideline for JSCE Study Tour Grant

- Supplementary Provision Study Tour Grant (STG) was established in 1992 to utilize JSCE supported International Scientific Exchange Fund more effectively and more appropriately.
- It was created as a program for supporting scientific study tours which make it a principle to exchange science and technologies and cultivate a deep international fellowship.
- At the time of establishment, the purpose of STG was to make Japanese civil engineering technologies and projects widely known among the engineers inside and outside Japan.

Implementation Guideline for JSCE Study Tour Grant

- Therefore, at the end of the program, the invitees to the STG program were expected to deliver the results of their experience gained in Japan to JSCE and also to the official bodies or academic journals back home.
- Based on over 20 years of experience from its launch, the STG program shall focus not only on the spread of Japanese civil engineering information but also on the development of engineers who play a role of liaison between their home countries and Japan.

PAST JSCE STUDY TOUR GRANT RECIPIENT

- 2008 JSCE Study Tour Grant **Michael J. David** Recipient of JSCE Study Tour Grant, 2008 Manager, DAMICO Builder and Supplies, Assistant Manager, LSD Construction and Supplies and President of Tarlac Chapter, the Philippine Institute of Civil Engineers, Inc.
- 2009 Japan Society of Civil Engineers Study Tour Grant Report **Jeramee Villadiego Dimapilis** 5th Year Civil Engineering Student, University of Perpetual Help System – Laguna, Philippines
- 2015 Japan Society of Civil Engineers Study Tour Grant **Jess Anthony P. Alcid** B.S. Civil Engineering Specializing in Hydraulics and Water Resources Engineering De La Salle University-Manila
- 2016 Japan Society of Civil Engineers Study Tour Grant **Alben Rome B. Bagabaldo**, Lecturer/Instructor at Mapúa University Studied Civil Engineering at Mapúa Institute of Technology

HOW DID I KNOW ABOUT STG PROGRAM?

- I learned about the Study Tour Grant (STG) while I was browsing my Facebook last February 2017,
- Immediately after opening the link in or official communication page of PICE NATIONAL, I inquire in PICE DAVAO CITY CHAPTER, and I asked them on how to join the said program,
- They told me to prepare my resume and other requirements.

DURING THE SCREENING

- 1) Recommendation letter
- 2) Nominee's C.V. (resume)
- 3) Completed Questionnaire

TASK TO COMPLY AFTER BEING SELECTED

- **to make a presentation at the International Summer Symposium**
- to schedule a trip to Japan from September 10 to 16
- including a passport, visa and other necessary arrangements
- to make a reservation of a round-trip air ticket between his country and Japan, accommodation and others.
- invitation letter to secure his visa, please request it with a copy of passport to Yukiko Shibuya of JSCE
- **To get some advises from PICE Senior Member**

IN PREPARATION FOR MY PRESENTATION

- My Study is " Feasibility Study on a Proposed Hydro Power Plant in Camp Abubakar, Maguindanao"

- I coordinated our Regional Planning Development Office Executive(RPDO) "ARMM NEDA" Director Engr. Baintan Ampatuan for the verification of my data

IN PREPARATION FOR MY PRESENTATION

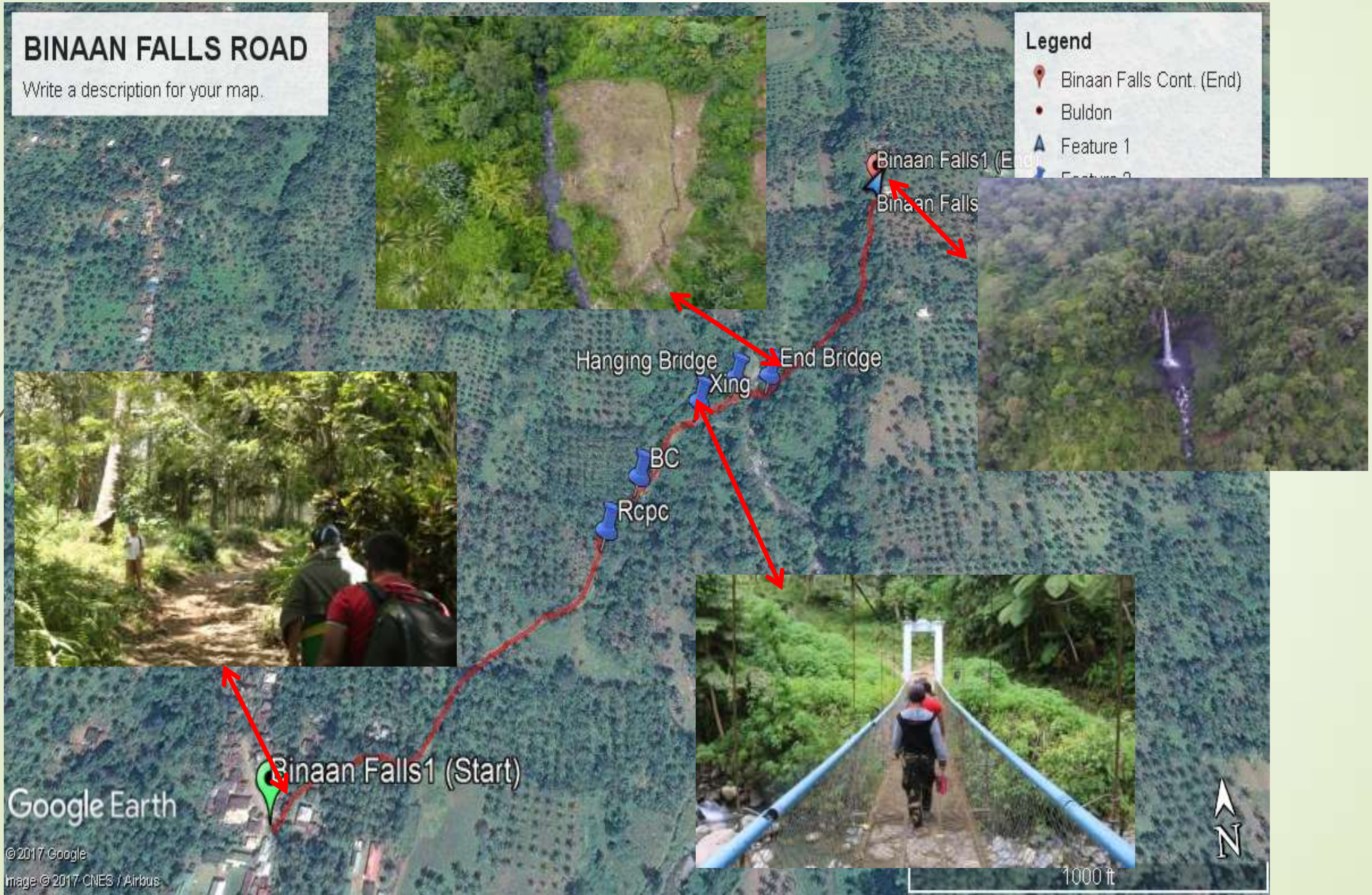
- Then I personally went to our District Engineer Nasrodin Ibrahim and Zainal Mlok Jr. for assistance

IN PREPARATION FOR MY PRESENTATION




- I went to Mayor Manalao of Buldon, Maguindanao,

ROAD GOING TO BINAAN FALLS



A COURTESY VISIT TO REGIONAL COORDINATOR FOR REGION XI RD ALAN BORROMEO OF DPWH

SIMPLE TOKENS FROM PHILIPPINES TO JAPAN

2017 STG PARTICIPANTS

- 1)Mr. Mai Hoang Bao (Vietnam - VFCEA)
- 2) Mr. Ganzorig Tsevelsuren (Mongolia - MACE)
- 3) Mr. Pau Sian Muan (Myanmer - MES)
- 4) Ms. Tugce Ceran (Turkey - JSCE Turkey Section)
- **5) Mr. Al-Adzhar P. Usman (Philippines – PICE)**
- 6) Mr. Pornnarong Lueanpech (Thailand - JSCE Thailand Section)

DAY 0
ARRIVAL TO MANILA FROM MINDANAO

- COTABATO CITY
- DAVAO CITY
- MANILA
- HERITAGE HOTEL MANILA

DAY 0
ARRIVAL TO MANILA FROM MINDANAO

I have this unique experience in STG, I am the first and only Bangsamoro Engineer from Mindanao to be selected as the participant for STG,

ARRIVAL TO NARITA AIRPORT

NISHITETSU INN Shinjuku

HAD DINNER WITH MR. MAI STG OF VIETNAM

SHIBUYA

DAY 2
Visit Kajima Institute of Technology in Tokyo and move to Fukuoka by airplane to attend Networking Reception (JSCE Annual Meeting)

DAY 2

- Kajima Institute of Technology in Tokyo
- HANEDA AIRPORT
- FUKUKOA AIRPORT
- Networking Reception (JSCE Annual Meeting)

Kajima Institute of Technology in Tokyo

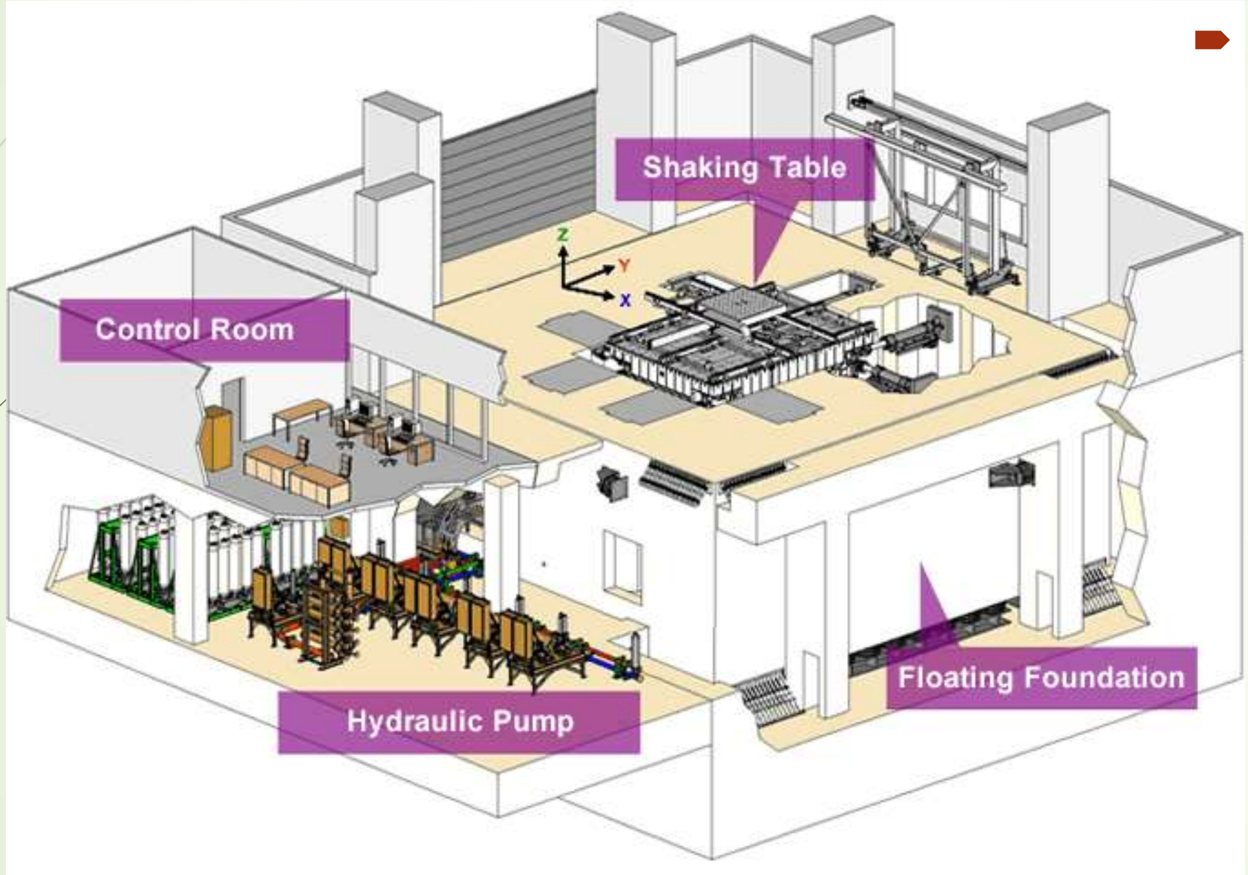
- The Kajima Corporation is one of the oldest and largest construction companies in Japan. It was founded in 1840 by Iwakichi Kajima, an innovative carpenter and designer.
- KAJIMA Technical Research Institute KAJIMA Technical Research Institute (KaTRI) was established the industry's first research institute in 1949, then moved to locate in the Chofu city.
- KaTRI have main three missions including research and development, technical cooperation & consultation and training & dissembling information.
- Furthermore, in term of famous research institute, KaTRI aspects have covered an extremely wide range in the field of technology; civil engineering, building science, disaster prevention and environmental consideration.

Kajima Institute of Technology in Tokyo

Kajima Institute of Technology in Tokyo

- The Nishichofu Complex, the center of research and development, has an area of 20,000 square meters with eight (8) buildings for their test equipment and facilities. We were able to visit five (5) facilities,
- (1) Shaking Table Laboratory,
- (2) Large-size Structural Testing ,
- (3) Concrete and Wind-tunnel,
- (4) Construction and Fire Safety,
- (5) Exhibit Area.

Shaking Table Laboratory,



- In the Shaking Table Laboratory, we were astounded by how they simulate earthquakes using two types of shaking table: one is 5x7m in size that can move at a velocity of up to 200 cm/sec and a displacement of 70cm horizontally, and a velocity of 100 cm/sec and displacement of 30cm vertically, both with acceleration of 2 g, while the other one is a small table 2.1x2.1m in size and reproduces large displacements of up to 2m for the two horizontal directions when carrying a 5-ton specimen

Large-size Structural Testing ,

- This system can be applied to various kind of structural test such as static/dynamic loading tests, fatigue tests and pseudo-dynamic tests. It is very effective especially in rapid loading, many repetitive loading and multi-axial combined loading because computers automatically control loading and measurements.

Concrete and Wind-tunnel,

Three types of wind tunnels can accommodate a variety of research objects on wind with specific requirements.

1.Large Boundary-Layer Wind Tunnel
2.Multipurpose Boundary-Layer Wind Tunnel
3.Visualization Wind Tunnel

Large Boundary-Layer Wind Tunnel

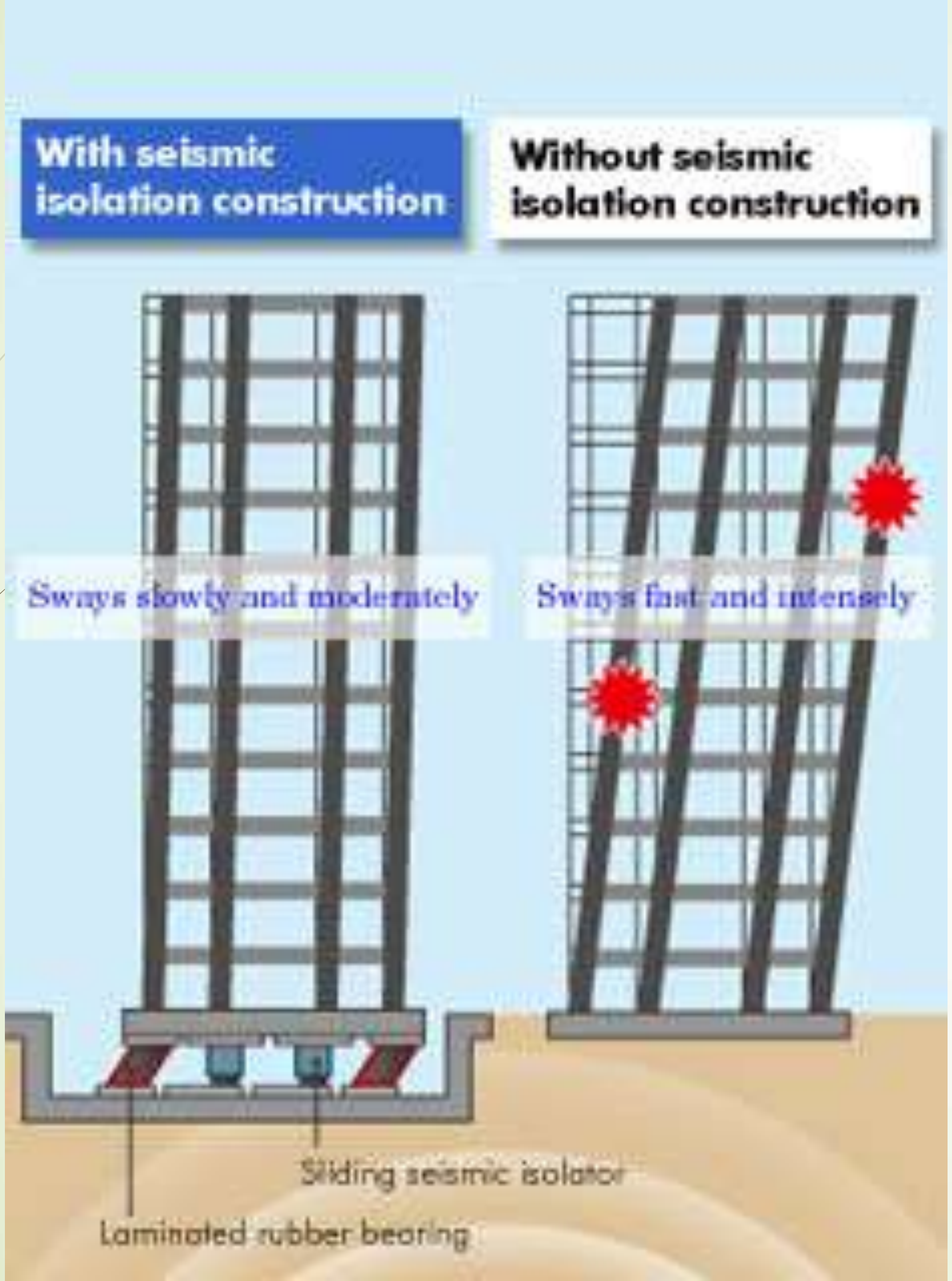
- Its size, width 4.5m * height 2.5m for dimensions of the working section, sufficiently allows for the modeling of vast area required for test of large-area regional development.
- This wind tunnel is used for the investigation of wind effects on super high-rise buildings and large-span structures ,making the best use of the large working section.
- In addition to structures, its applications are also for the investigation of wind flow affected by the change in land shapes for vast area.
- Careful considerations are made on measurement: it's equipped with a temperature control device that keeps the temperature of air flow constant, corner vanes with silencers that reduced the wind noise at the working section, etc..

Multipurpose Boundary-Layer Wind Tunnel

- This wind tunnel, width 2.5m * height 2.0m for dimensions of the working section, is used for investigation on the wind effect that acts upon ordinary buildings.
- As its naming indicates, its wide range of applications include investigation on local wind environment around buildings, wind loads on claddings, wind-induced vibration of structures, etc..
- Examinations on the wind-induced noise in and around buildings adopting corner vanes with silencers, and testing that utilizes the maximum wind speed of 50m/s are also available.

Visualization Wind Tunnel

- In order to clarify the complicated nature of flow around structures, this wind tunnel is devised in a variety of ways to visualized the flow which normally cannot be seen.
- By emitting the smoke or the micro powders in the windward of the model and irradiate the laser-light sheet upon them, the air flow can be observed at an arbitrary section.
- The use of digital image processing to analyze flow visualization images from photographs or video frames in order to obtain the velocity and direction of wind around structures is also available.



the principle of **vibration isolation** can be utilized to protect a building is decoupled from the horizontal components of the earthquake ground motion by mounting **rubber bearings** between the building and its foundation


17586
TYPE-6E

KAJIMA
“EXPLORING TODAY BUILDING TOMORROW”

HANEDA AIRPORT

FUKUOKA AIRPORT

JSCE Networking at Kyushu University Fukuoka

NISHITETSU Grand Hotel

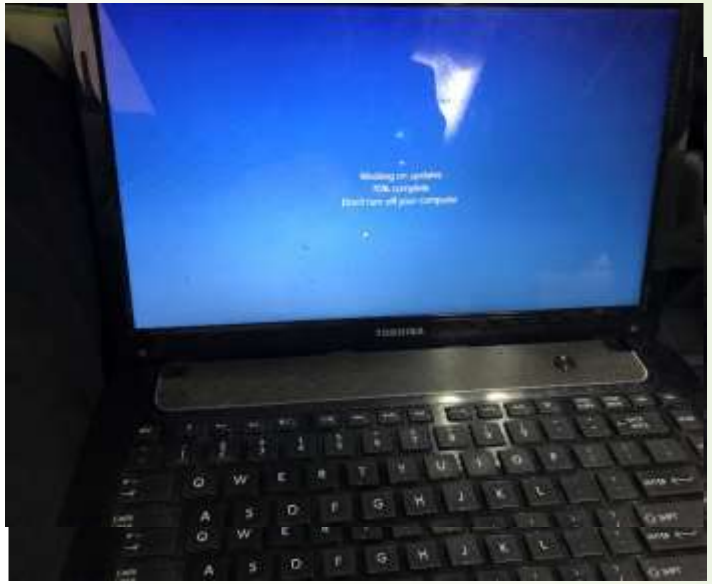
DAY 3

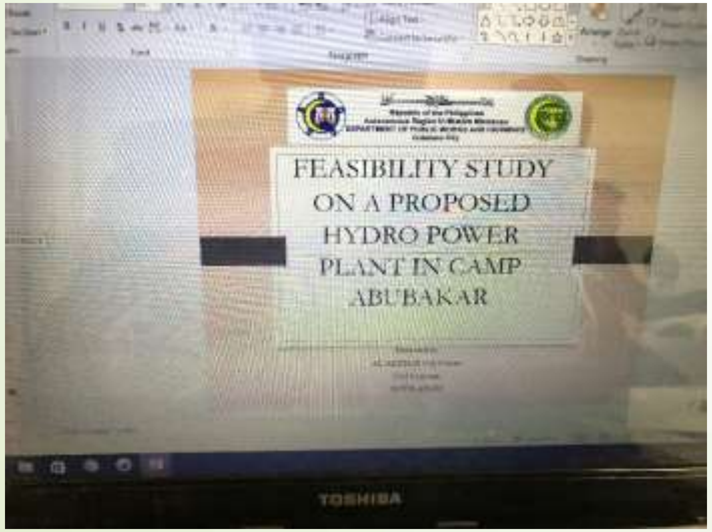
19th International Summer Symposium at Kyushu University and Technical Tour in Kumamoto Prefecture

DAY 3

- **19th International Summer Symposium at Kyushu University**
- Yabegawa Bridge
- Yabe-river levee breakdown site
- Miike Coal Mine Site
- Hotel Route Inn Kumamoto
- Japanese Restaurant

The 19th International Summer Symposium





The 19th International Summer Symposium




Yabegawa River (Seismic Bridge and Flood Area)

-
  Yabegawa Bridge: Japan’s Longest Cable-Stayed Prestressed Concrete Bridge
- **The Yabegawa Bridge forms part of the Ariake Sea Coastal Road along the Ariake Sea in southern Japan.**
- The three-span, continuous cable-stayed prestressed concrete bridge crossing the Yabe River is 19m wide and features a 261m center span as well as two side spans of 128m each. With a length of 517m, the Yabegawa Bridge is the longest cable-stayed prestressed concrete bridge in Japan.

Yabegawa Bridge: Japan's Longest Cable-Stayed Prestressed Concrete Bridge

- The Yabegawa Bridge is curved – a feature that is very rare for a bridge this size. The project is characterized by many different technical features. These include an inclined inverted-Y-shape main pylon structure, a trigger-type stopper structure, very deep pneumatic caissons, the use of a massive form traveler for cantilever erection, and the use of an elevator-type movable scaffold for the main pylons.
- To improve construction efficiency, the main girders were built using 8m long segments that were positioned using a massive form traveler weighing approximately 300t. Since each segment was 8m long instead of the usual 4m, construction time was shortened by five months at an installation rate of approx. 17 days per segment. In order to establish a reduced cycle time, the cantilever construction method for the segments positioned right and left was also adjusted accordingly, and the support structure was specially designed. 44 to 48 Type SBPR 930/1180, Ø 32mm DYWIDAG Post-Tensioning Bars supplied by Sumitomo were installed per section for cantilever segment alignment and tensioning.

Yabegawa Bridge: Japan's Longest Cable-Stayed Prestressed Concrete Bridge

- The bridge was erected in an area with very soft clay soil. Therefore, construction of the bridge involved extensive studies and special measures to account for the settling of the main pylon foundations during work on the superstructure. One of these measures consisted in using high-strength external tendons for effective reinforcement against unexpected settlement.

- The tendons were 269m long in the center span and 131m long in the side spans. There was only little space to insert the 269m tendons inside the girder and to post-tension them. All of the tendons in the side spans were stressed conventionally at the end support using a multi-strand jack. For the tendons in the main span, strands were stressed individually using a monostrand jack due to limited working space. Thanks to this procedure, construction was carried out efficiently. The Yabegawa Bridge was completed in early March 2009, and traffic now flows freely on a 23.8km long section between Omuta City and Okawa City.

Yabe-river levee breakdown site

- Yabe River, which runs in the southern part of Fukuoka Prefecture,. Length of main stream is 58.3km and catchment area is 618 square km. The area of paddy irrigated in the basin is about 15,000ha.

Yabe-river levee breakdown site

Miiki Coal Mine

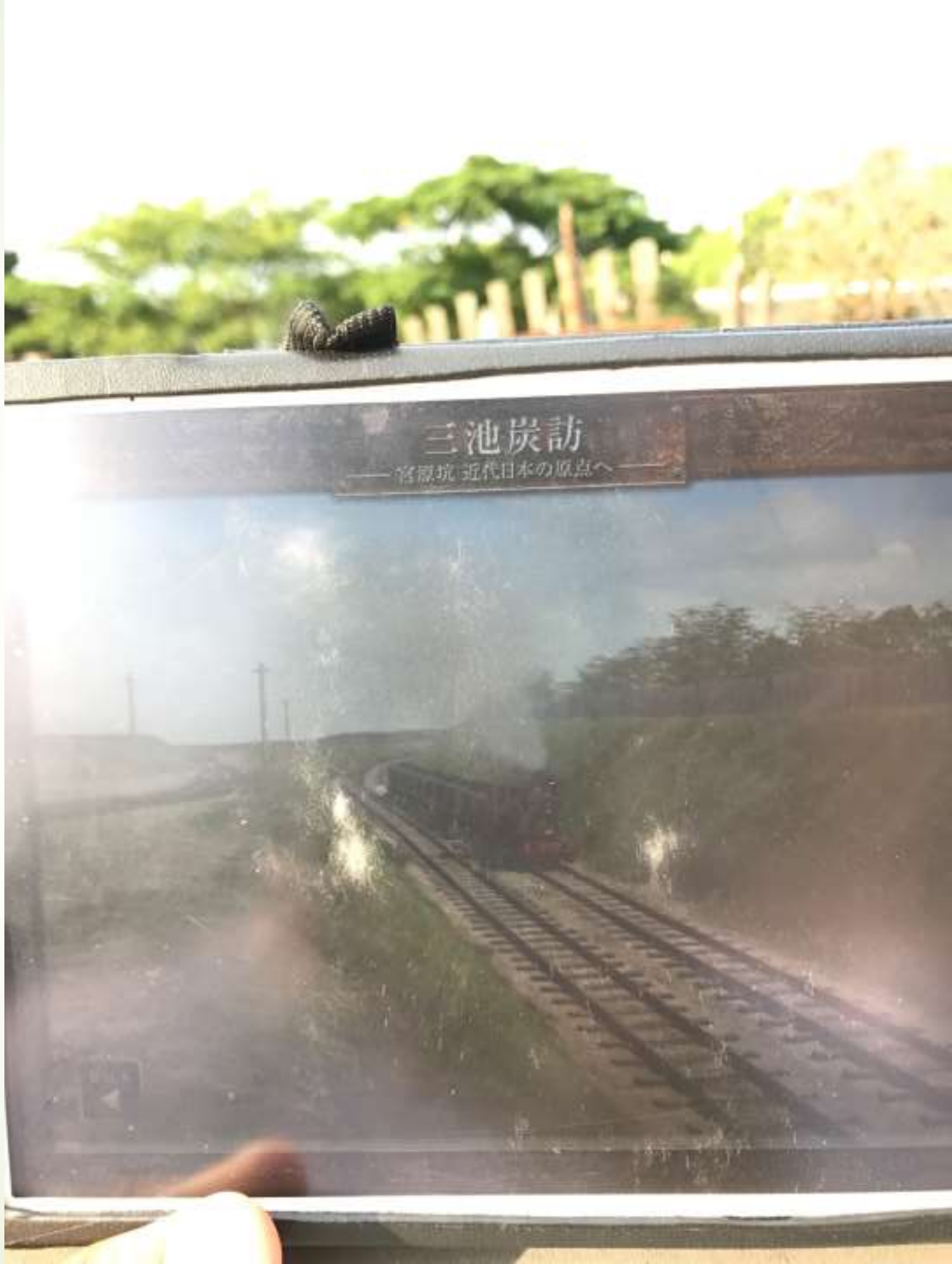
- Back to the Japan's Meiji industrial revolution from the mid-19th century to the early 20th century,
- Japan constructed its foundation to become an industrialized nation and rapidly industrialized the heavy industries, which were iron and steel manufacturing, shipbuilding and coal mine.
- The Miiki Coal Mine and Miiki Port was the site number 7 of the Japan's Meiji industrial revolution.
- The mining began in the region during the Kyoho era, with the Miike mine under the control of the Tachibana clan.

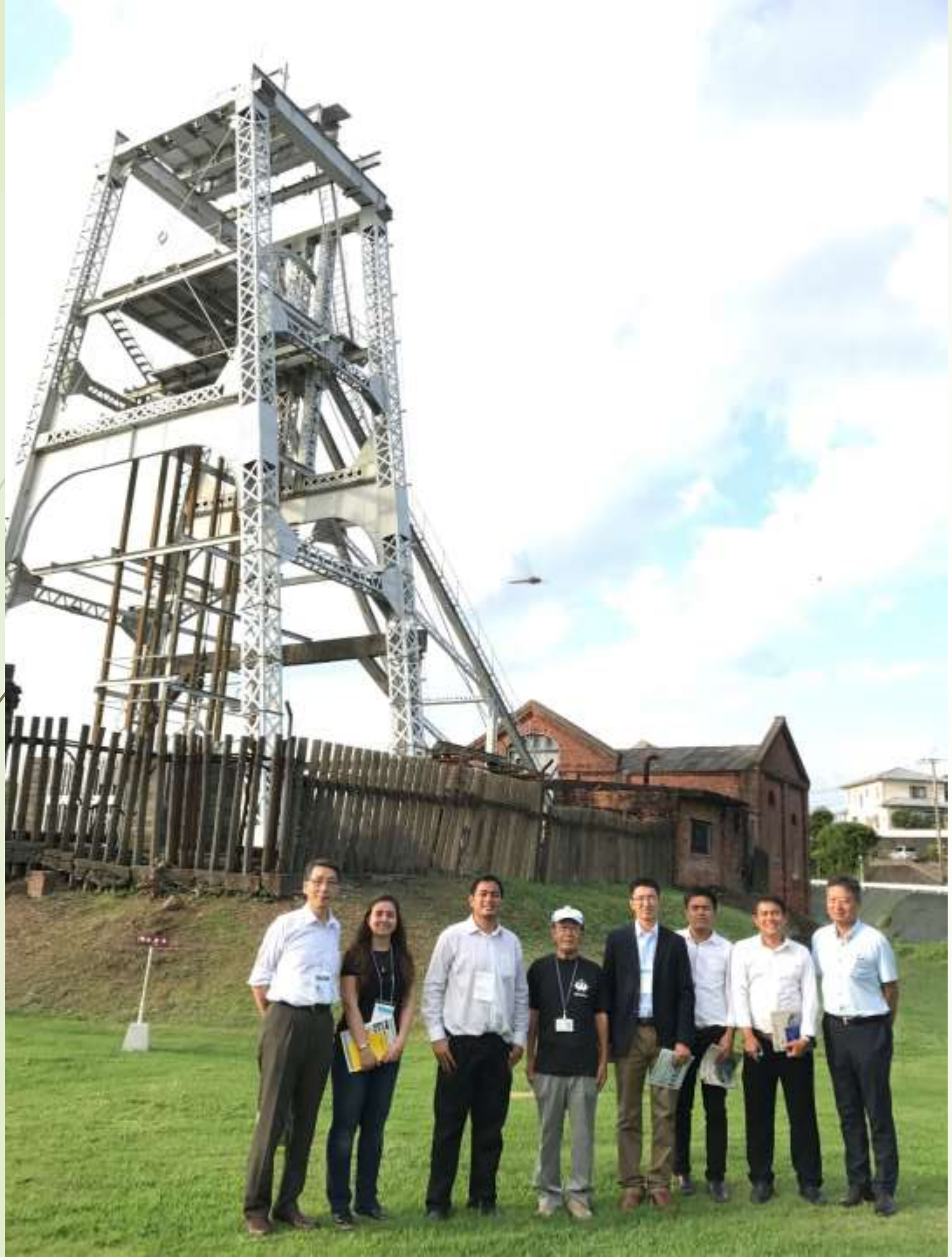

宮原坑跡デビーポンプ室壁
Wall of Davey Pump Room, Miyanohara Shaft
大牟田市



KS 55/7
S60.5.20


宮ノ浦坑内採炭実況
大正十四年頃


三池炭訪
宮原坑 近代日本の原点へ



Hotel Route Inn Kumamoto

DINNER AT JAPANESE RESTAURANT

Fig 11. Basashi; Raw Horse Meat & Night Scene of Kumamoto

DAY 4
Technical Tour in Kumamoto (1) Kumamoto Castle (2) Tsujun Bridge (3) Daikanbou(Viewing Aso Mountain) (4) Aso Bridge

DAY 4

- Kumamato-Castle
- Tsujun Bridge
- Shiiwaro Fountain
- Aso Ohashi Bridge reconstruction site
- Arrive at KUMAMOTO Airport
- Leave the airport for HANEDA Airport by Flight JAL6347

The 2016 Kumamoto earthquakes

- are a series of earthquakes, including a magnitude 7.0 mainshock which struck at 01:25 JST on April 16, 2016 beneath Kumamoto City of Kumamoto Prefecture in Kyushu Region, Japan, at a depth of about 10 kilometres and a foreshock earthquake with a magnitude 6.2 at 21:26 JST on April 14, 2016, at a depth of about 11 kilometres
- The two earthquakes killed at least 50 people and injured about 3,000 others in total. Severe damage occurred in Kumamoto and Ōita Prefectures, with numerous structures collapsing and catching fire.
- More than 44,000 people were evacuated from their homes due to the disaster.

Kumamoto Castle

- Kumamoto Castle is a hilltop Japanese castle located in Chūō-ku, Kumamoto in Kumamoto Prefecture. It was a large and well fortified castle. The castle keep (天守閣 tenshukaku) is a concrete reconstruction built in 1960, but several ancillary wooden buildings remain of the original castle.
- Kumamoto Castle is considered one of the three premier castles in Japan, along with Himeji Castle and Matsumoto Castle.
- Thirteen structures in the castle complex are designated Important Cultural Property

Kumamoto Castle

Kumamoto Castle

- The castle sustained damage in a magnitude 6.2 earthquake that struck at 9:26 pm on 14 April 2016, in Mashiki town in Kumamoto prefecture. This event is substantially similar to the 1889 Kumamoto earthquake which also damaged the castle.
- A stone wall at the foot of the keep partially collapsed, and several of the castle's shachihoko ornaments fell from the roof of the keep and broke apart.
- It sustained further extensive damage the next day on 15 April following a 7.3 magnitude earthquake where some portions were completely destroyed

Kumamoto Castle

Kumamoto Castle

The Kumamoto Municipal Government has provisionally calculated the total figure at about 63.4 billion yen or roughly 29 billion PESOS but it is possible that this might increase further.

Tsujun Bridge

- Tsūjun Bridge (通潤橋 -kyō) is an aqueduct in Yamato, Kumamoto, Japan. It is an arch bridge completed in 1854 and is 84.0m long. The arch spans 27.3m. It is the largest stone aqueduct in Japan.

Tsujun Bridge

- This bridge proves the high level of stone bridge technology at the time it was built. Yasunosuke Futa (1801–1873), who was the head of the then Yabe village, planned and after funding, with the help of the group of 41 stone technicians and many farmers, succeeded in building the bridge in 1854. Its purpose was to let water flow into a higher area (Shiroito Plateau) for farming


くまフォト

Shirakawa Springwater

- Shirakawa Suigen is famous for its water, which was selected as one of the 100 best waters in Japan by the Environmental Agency.

Fee/price:

- 100 yen (per person) (fee helps support the protection of the environment)

Shirakawa Springwater



Aso Bridge and Sabo Work

The Tateno district, background left, which was divided by the collapse of the Aso Ohashi bridge, is pictured in this photo taken from a Mainichi helicopter on April 22, 2016. (Mainichi)

Aso-Choyo-ohashi bridge, foreground, is closed to traffic in Minami-Aso, Kumamoto Prefecture, on March. 14. The new Aso-ohashi bridge is planned to be built in the background. (Motoki Nagasawa)

Aso Bridge and Sabo Work

- MINAMI-ASO, Kumamoto Prefecture--The collapsed Aso-ohashi bridge here is on the road to recovery under plans revealed to rebuild the structure by the end of September 2020.
- The 200-meter-long road bridge spanned a deep gorge before a magnitude-7.3 earthquake destroyed it on April 16, 2016, following a magnitude-6.5 temblor two days earlier.
- The infrastructure ministry's Kyushu Regional Development Bureau invited bids for the project this past February, presenting the completion date as a condition.
- Surrounding roads will also be rebuilt after the bridge rises again, and subsequently, the new route will be open to traffic.
- Aso-ohashi bridge--meaning Aso large bridge--used to be part of National Road No. 325 across the Kurokawa river. It played an important role in connecting National Road No. 57, which led to the Kumamoto city area, with the southern part of the Aso region.
- The new bridge will be built about 600 meters downstream from the previous Aso-ohashi bridge site due to a large-scale landslide there which would delay any effort to use the same location.
- The 5.275 billion yen ($45.97 million) construction contract was won by a joint venture between Taisei Corp. and other companies.

Aso Bridge and Sabo Work

Year 2009

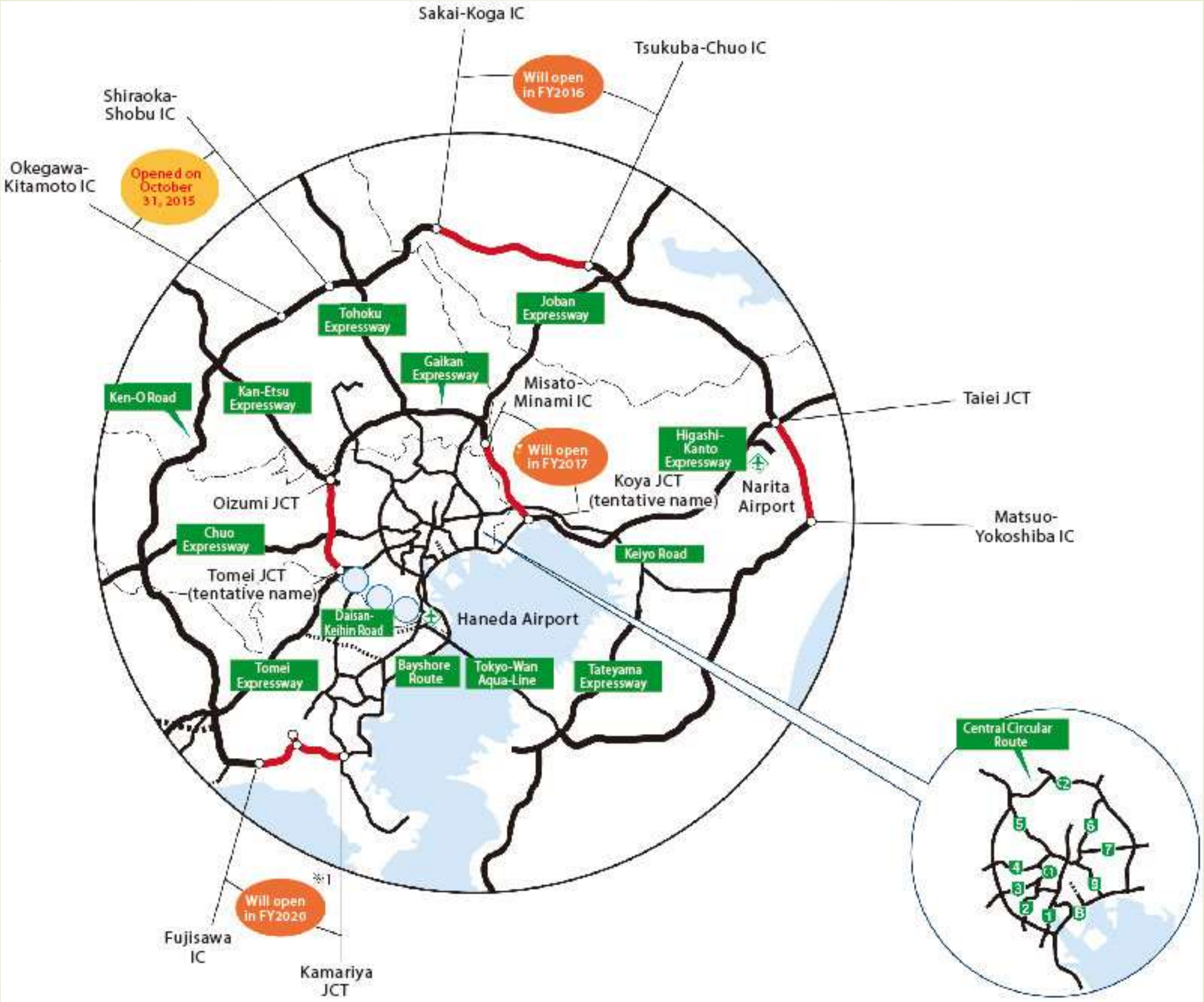

国土交通省
斜面中腹の堆積土砂除去用遠隔操作室の状況
遠隔操作室の操作環境

Aso Bridge and Sabo Work

DAY 5- Visit Tokyo-Gaikan Expressway:” TAJIRI-Area Project”, SHIMIZU Institute of Technology, JR Tokyo Station Site

Tokyo-Gaikan Expressway Tajiri Project

- Tokyo-Gaikan Expressway Tajiri Project in Chiba Prefecture.
- There I learned that the project aims to accomplish five objectives which are:
- 1) shorter driving times,
- 2) Safer Residential Road,
- 3) Abundant Greenery,
- 4) Faster Disaster Response, and
- 5) Vital Utilities Stored Underground.
- Seventy percent (70%) of heavy traffic on the inner Circular Route is not bound for Tokyo City thus, this project will ease traffic in the city center by creating an alternative route for traffic passing by.

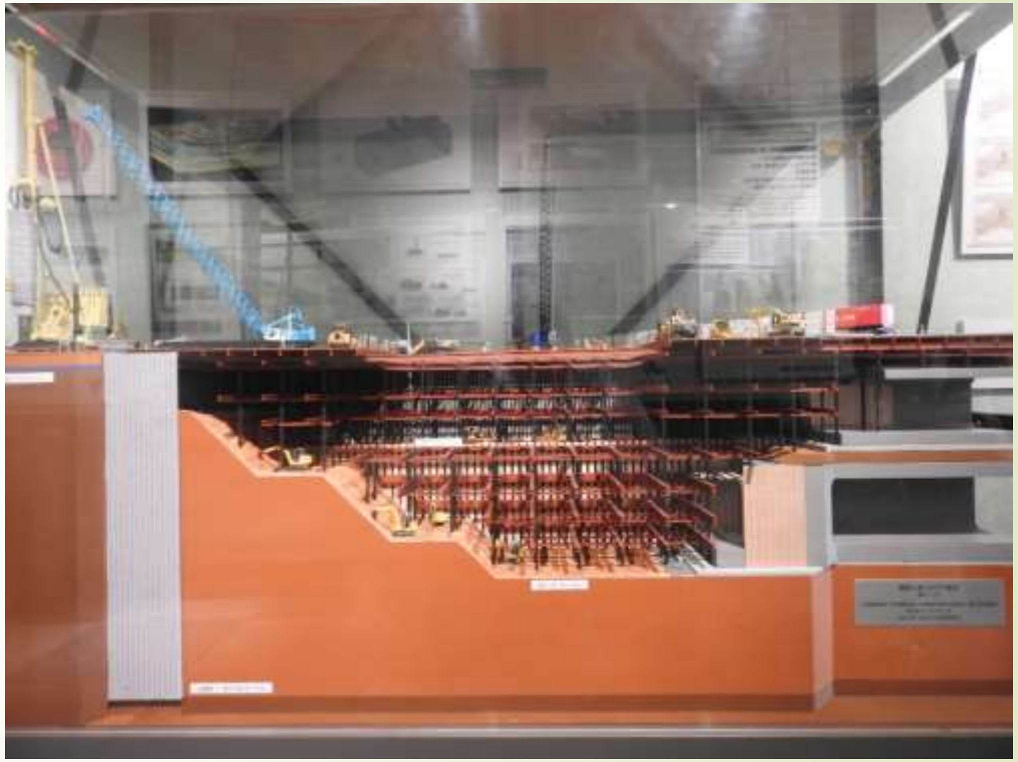


Sakai-Koga IC
Tsukuba-Chuo IC
Will open in FY2016
Shiraoka-Shobu IC
Okegawa-Kitamoto IC
Opened on October 31, 2015
Tohoku Expressway
Joban Expressway
Gaikan Expressway
Misato-Minami IC
Taiei JCT
Ken-O Road
Kan-Etsu Expressway
Higashi-Kanto Expressway
Will open in FY2017
Koya JCT (tentative name)
Narita Airport
Oizumi JCT
Matsuo-Yokoshiba IC
Chuo Expressway
Keiyo Road
Tomei JCT (tentative name)
Daisan-Keihin Road
Haneda Airport
Tomei Expressway
Bayshore Route
Tokyo-Wan Aqua-Line
Tateyama Expressway
Central Circular Route
※1
Will open in FY2020
Fujisawa IC
Kamariya JCT

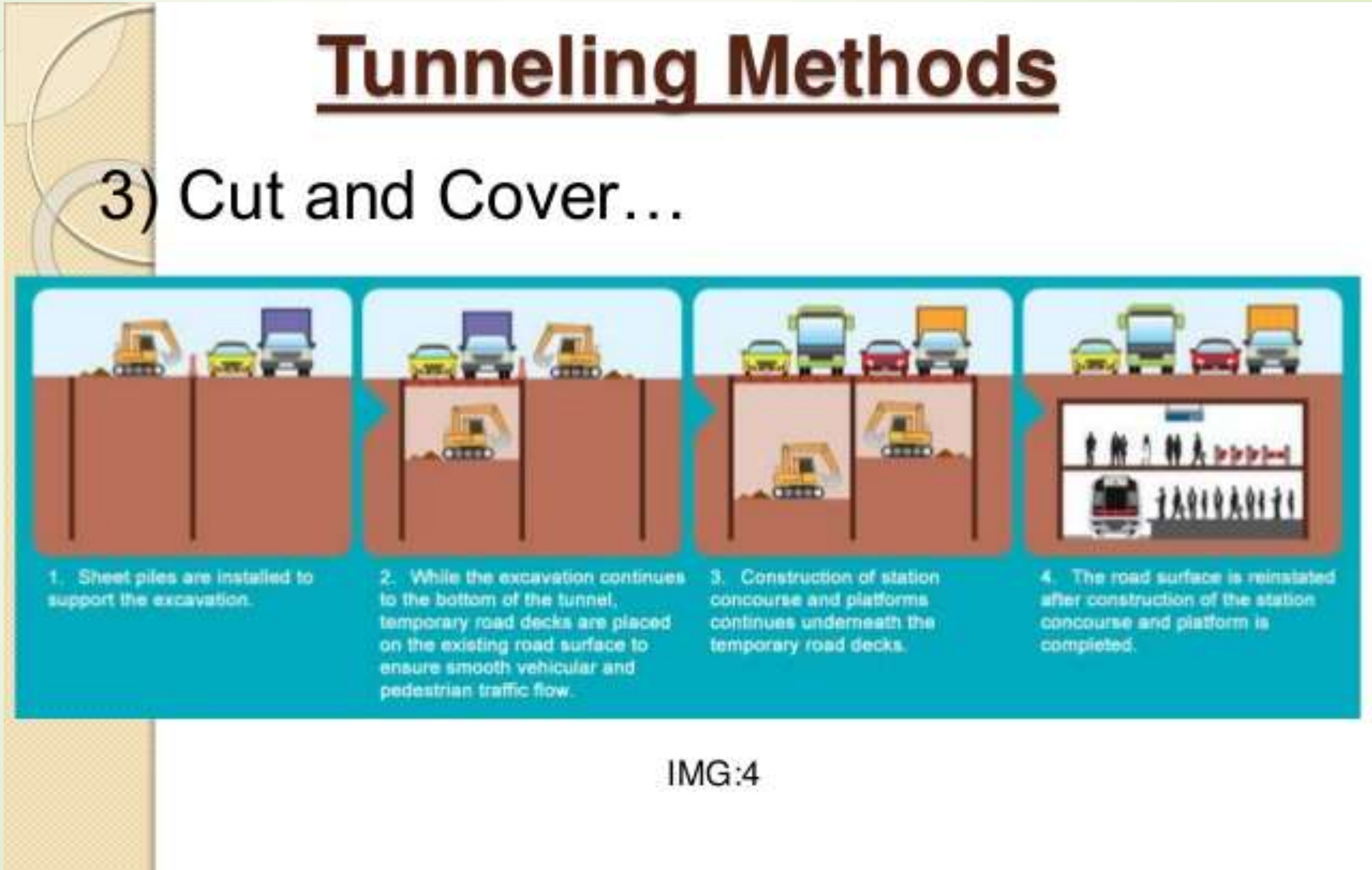
Tokyo-Gaikan Expressway Tajiri Project

- East Nippon Expressway Company Kanto-Branch Ciba-Construction Office TAISEI-TODA-DAIHO Joint Venture used the following methodology for the project:
- 1) Cut and Cover Method, and
- 2) Shield Tunneling Method.

Tokyo-Gaikan Expressway Tajiri Project

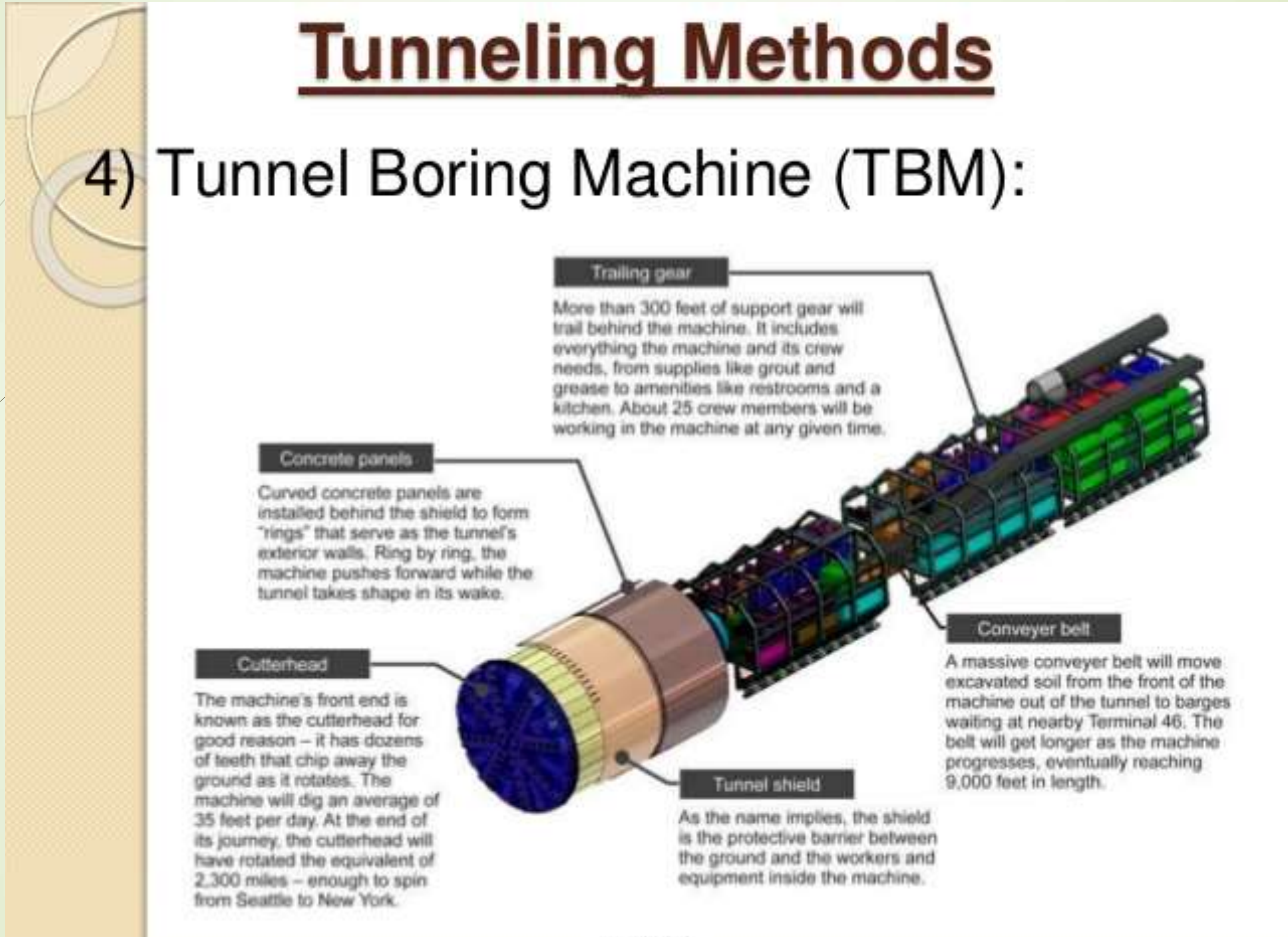


Cut and Cover Method,



Cut and Cover Method,

Shield Tunneling method.



IMG:5

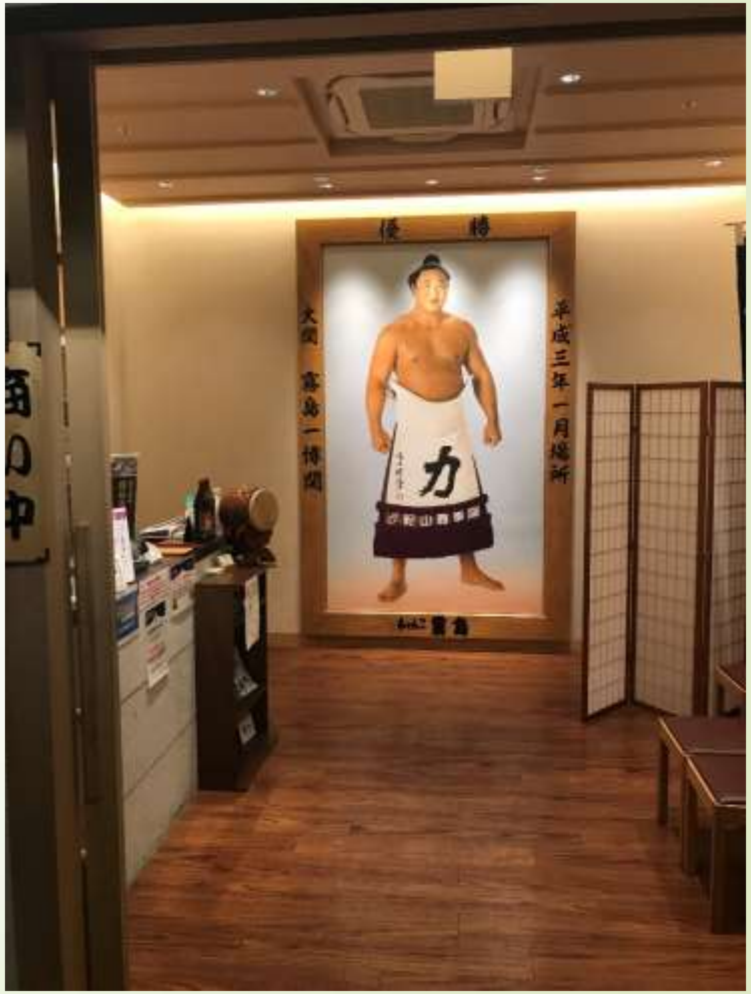
Shield Tunneling method.

Tokyo-Gaikan Expressway Tajiri Project

Sumo Stadium

- Ryōgoku Kokugikan (両国国技館 Ryōgoku Kokugikan), also known as Ryōgoku Sumo Hall, is an indoor sporting arena.
- has a capacity of 11,098 people
- It is mainly used for sumo wrestling tournaments (honbasho) and hosts the Hatsu (new year) honbasho in January, the Natsu (summer) honbasho in May, and the Aki (autumn) honbasho in September.

Sumo Stadium



Shimizu Institute of Technology

Figure 32 Mr. Nakamura introduced SHIMIZU Institute of Technology

Shimizu Institute of Technology

1804	Founder Kisuke Shimizu establishes the company in Kanda Kaji-cho, Edo (present-day Tokyo).
1915	Transformed from private management to corporation, and renamed Shimizu Gumi.
1937	Reorganized as Shimizu Gumi, Ltd.
1944	Research and Development Section established within Design Division.
1948	Renamed Shimizu Construction Co., Ltd.
1998	Received ISO9001 certification in Japan. Completed Japan's leading Electromagnetic Environment Laboratory at Shimizu's Institute of Technology.

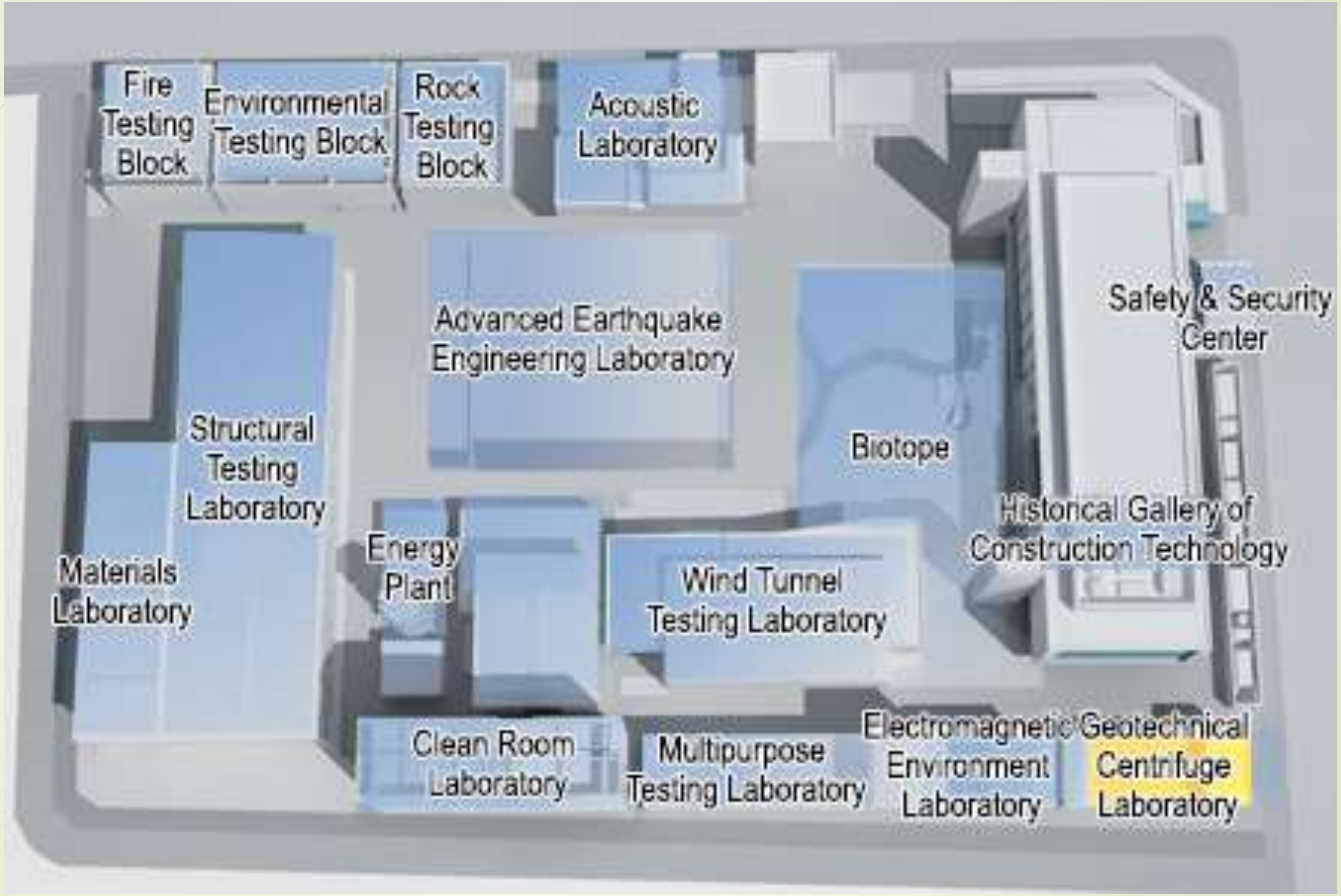
Shimizu Institute of Technology

- Shimizu Corporation has a history of more than 200 years. The Shimizu Institute of Technology, established in 1944, was the first such institute in the construction industry. Since that time, our Institute has played a major role in the modernization of construction technology.
- Construction industry has been dedicated to the development of a "safe and reliable society in the 21st century." Towards the realization of such society, the Institute of Technology is pursuing innovation and new values 10 years ahead of the times.
- The Institute is located in central Tokyo and easily accessible. We continue to serve society as an "Open Institute of Technology" and develop technologies and solutions that surpass our customers' expectations.

Shimizu Institute of Technology

- We created a new corporate statement, "Today's Work, Tomorrow's Heritage" in 2008, that clearly expresses the core values of Shimizu Corporation and our role in society.

Shimizu Institute of Technology



Shimizu Institute of Technology

- 1) Earthquake proof research & methodology,
- 2) Wind Tunnel Testing Laboratory,
- 3) Shaking Table Test,
- 4) Geotechnical Centrifuge Laboratory

A new type of seismic isolation system—called the **core-suspended isolation (CSI)** system—has been developed and first building application recently completed. The CSI system consists of a reinforced concrete core on top of which a seismic isolation mechanism composed of a double layer of inclined rubber bearings is installed to create a pendulum isolation mechanism.

Obayashi **Tokyo Station** Project Site Tour

- Tokyo Station North Pedestrian Passage Enhancement Project

Obayashi **Tokyo Station** Project Site Tour

North Pedestrian Passage of **6.7 meters** to **12.0 meters**

Obayashi **Tokyo Station** Project Site Tour

Dinner with ISEF Committee Members

Dinner with ISEF Committee Members at "Budo no mori – Godanya"

Figure 37 A delicious meal with JSCE

Dinner with ISEF Committee Members

FREE TIME at the morning

SIGHTSEEING

TOKYO CRUISE: SUMIDAGAWA RIVER SIGHTSEEING

SIGHTSEEING

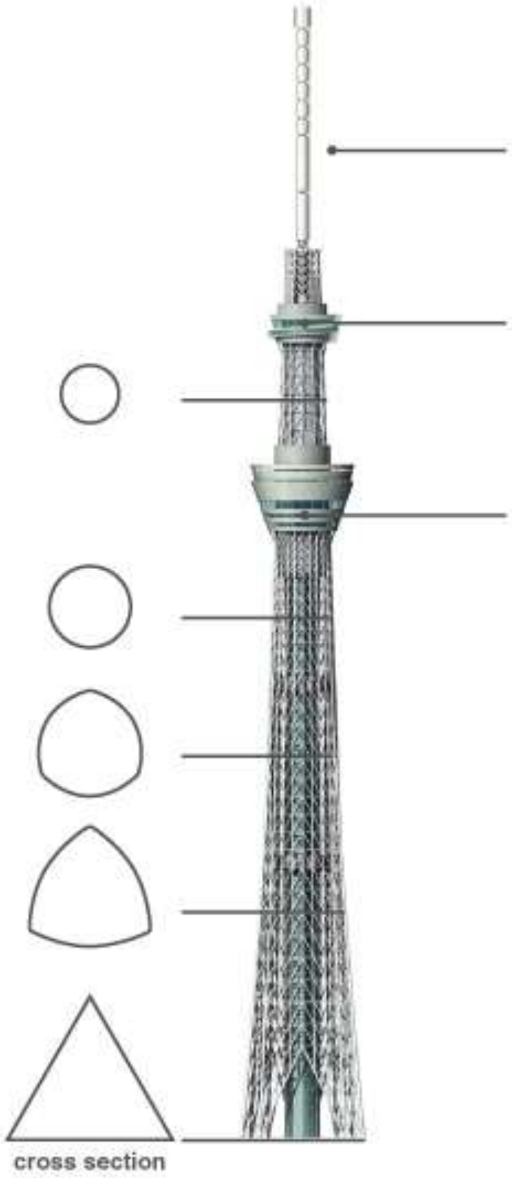
TOKYO CRUISE: SUMIDAGAWA RIVER SIGHTSEEING

SIGHTSEEING

ASAKUSA SIGHTSEEING; Nakamise Street, Kaminarimon Gate, Senso-ji Temple

Overview of Facilities

Perspective drawing of completed tower
Provided by Tobe Railway Co., Ltd. & Tobu Tower Sky Tree Co., Ltd.



Digital Broadcasting Antennas
Mainly to house television broadcastig antennas.

Antenna Tower
The long and slender uppermost section is the "antenna tower" for digital-terrestrial broadcasts, with many antennas for TV stations set around it.

Second Observatory (450m)
This observatory has two decks, with a spiraling aerial corridor around it. The glass-walled corridor leads you from the arrival lobby upstairs to the world' s highest observation deck.

First Observatory (350m)
This three-story observatory houses the observation decks and shops. The elevators to the second observatory are located here.

HIGHEST TOWER IN THE WORLD
634 meters

Triangular to Circular in Plan
The lowest section of the tower is triangular in plan and supported by three legs. The shape is gradually rounded, until at the height of about 300 meters it becomes a perfect circle.

SIGHTSEEING

Tokyo Sky Tree Tour

SIGHTSEEING

Tokyo Sky Tree Tour

SIGHTSEEING

Tokyo Sky Tree Tour

SIGHTSEEING




Tokyo Sky Tree Tour

FINAL NIGHT WITH STG PARTICIPANTS

DEPARTURE TO MANILA





ARRIVAL TO PHILIPPINES

GRATITUDE


SIGNIFICANT GAINS OF REFORM IN DPWH-ARMM UNDER THE HATAMAN ADMINISTRATION
DPWH - ARMM
On the ROA


SIGNIFICANT GAINS OF REFORM IN DPWH-ARMM UNDER THE HATAMAN ADMINISTRATION
DPWH - ARMM
On the ROAD
to Sustaining Reforms
RODRIGO R. DUTERTE
BELL


PHILIPPINE INSTITUTE OF CIVIL ENGINEERS
INSTITUTE OF CIVIL ENGINEERS
VAO CITY CHAPTER, INC.
Cambodia

COURTESY VISIT TO **USEC EMIL SADAIN** AND BREAKFAST WITH NATIONAL BOARD OFFICERS, **SIR BONG SUERO, ANGEL TORREJON AND CARY H. BEATISULA**

THANK YOU FOR YOUR TIME!!