

**MINISTRY OF
EDUCATION AND SPORTS
THE LAO PEOPLE'S
DEMOCRATIC REPUBLIC**

**PREPARATORY SURVEY REPORT
ON
THE PROJECT
FOR THE RECONSTRUCTION OF
THE CHAO ANOUVONG STADIUM
IN THE LAO PEOPLE'S DEMOCRATIC
REPUBLIC**

DECEMBER 2023

JAPAN INTERNATIONAL COOPERATION AGENCY

**AZUSA SEKKEI CO., LTD.
KOKUSAI KOGYO CO., LTD.
INTEM CONSULTING, INC.**

PREFACE

Japan International Cooperation Agency (JICA) decided to conduct a preparatory survey and entrust the survey on the Project for the Reconstruction of the Chao Anouvong Stadium in the Lao People's Democratic Republic to the consortium of Azusa Sekkei Co., Ltd., Kokusai Kogyo Co., Ltd., and INTEM Consulting, Inc.

The survey team held a series of discussions with officials of the Royal Government of Laos, and conducted field investigations between November 2021 and September 2023. After further studies in Japan, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

Finally, I wish to express my sincere appreciation to the officials of the Royal Government of Laos for their close cooperation extended to the survey team.

December, 2023

Junko MASUDA
Director General,
Governance and Peacebuilding Department
Japan International Cooperation Agency

Summary

Summary

1. Outline of the Recipient Country

1) Geographical and Climatic Conditions

The Lao People's Democratic Republic (hereinafter referred to as "Laos") is a landlocked country that stretches along the Mekong River, which flows from north to south through the Indochina Peninsula. It has a land area of 236,800 km² and shares borders with Thailand, Vietnam, Myanmar, China and Cambodia. The site of this project, the capital city of Vientiane, is located near the border of the Mekong River and Thailand.

Vientiane has a Savanna-type climate with the Köppen climate classification of Aw, with the rainy season from April to October and the dry season from November to March. There is little change in temperature throughout the year, with average temperatures ranging from 22°C to 29°C, average maximum temperatures in the range of 28-34°C, and average minimum temperatures in the range of 17-25°C. Vientiane's hottest month is April, the last month of the dry season, when the maximum temperature rises to around 40°C. The average relative humidity is between 66% and 84%. Rainfall is concentrated in May to September, accounting for about 86% of the year's rainfall. Peak rainfall is about 334.6 mm in August.

The average wind speed is 7.1 to 9.8 km/h, and the wind intensifies from November to April and often comes from the east. The winds are strongest in February, with an average hourly wind speed of 9.8 km/h.

2) Socio-Economic Conditions

The GDP of Laos in 2021 was about \$18.55 billion, of which 15.95% is agriculture, 33.98% industry, 38.08% services, and the remaining 11.79% is taxes and import duties on products. The annual economic growth rate based on GDP was approximately 5-8% from 2010 to 2019, but in 2020 it fell sharply to -0.4%, probably due to the impact of the COVID-19 pandemic. It was 2.1% in 2021 and is expected to recover moderately going forward. (Lao Statistics Bureau, 2021)

The GNI per capita is approximately \$2,480, and it is classified as one of the least developed countries in the DAC classification. (ODA Country Data, 2021)

Agriculture is the main industry, accounting for more than 70% of the working population and more than 20% of GDP. Rice cultivation is the main focus, and in addition to the paddy fields in the Mekong River basin, there is also slash-and-burn farming in the mountains. Commodity crops include coffee beans and corn.

The political system follows the one-party leadership system of the People's Revolutionary Party, in which Party cadres concurrently serve as cadres of each state organ. The head of state is the President of the People's Republic of Laos, who is elected by the unicameral Lao National Assembly. The Lao National Assembly is responsible for overseeing legislative bodies as well as executive and judicial bodies. (Basic Data on Laos, Ministry of Foreign Affairs of Japan, January 2023)

2. Outline of the Request for Grant Aid Assistance from Japan

Located in the heart of Vientiane, the capital of Laos, Chao Anouvong Stadium is a symbol of the historic city. It was built in 1950 as the National Stadium. More than 60 years have passed since the stand had been rebuilt from wooden structure to reinforced concrete structure in 1961. The Government of Lao PDR and the Ministry of Education and Sports have positioned “improving the quality of life” and “urban development” as priority goals in the “Ninth Five-Year National Socio-Economic Development Plan (2021-2025)” and the “Education and Sports Sector Development Plan 2021-2025.” The government are promoting the improvement of the quality of life, citizens’ health, and the development of world-class athletes. Expanding sports facilities in order to spread the values of inclusiveness and diversity through urban development fusing sports and culture is another policy action.

Although the new National Stadium was built in the suburbs 16km from central area of Vientiane in 2009 by Chinese assistance, it is used mainly for international competitions. However, Chao Anouvong Stadium continues to be used for events for the general public and athletes, such as soccer and rugby, and para-athletic competitions in Laos, due to its fame and location. Given its easy access in the center of the city, it is in high demand, and it has also contributed to urban and cultural development and is integrated with civic life. However, the aging of the facilities is serious, and there is a shortage of facilities and equipment suitable for the use of athletes, as well as people with disabilities and regular citizens, which hinders safe and smooth operations.

Under these circumstances, the project for the Reconstruction of the Chao Anouvong Stadium in the capital city was requested in order to enhance the barrier-free functions and improve the safety of the facilities by refurbishing the stadium and its ancillary facilities and equipment. The aim is to promote the use of the stadium by athletes and a wide range of citizens, thereby contributing to the promotion of social participation of persons with disabilities, the furthering of sports and cultural activities, and improvement of urban environment in Laos.

3. Outline of the Survey Results and Contents of the Project (outlines of design, and facility and equipment plans)

Based on the above request, the Japan International Cooperation Agency (JICA) decided to conduct a preparatory survey on cooperation and dispatched an investigative team to the site from November 26, 2021 to January 14, 2022. In the field survey, in addition to consulting with Lao PDR government officials, a field survey was conducted in the project target area. After returning to Japan, the preliminary survey report was compiled after a briefing on the draft preparatory survey report conducted from September 11 to September 14, 2023.

With regards to the contents of this Grant Aid Project, the following plans were made based on the following policy, based on the Lao National Socio-Economic Development Plan, the medium-term plan for the Education and Sports sector, the utilization plan and operation and maintenance plan of Chao Anouvong Stadium, the classification of use with the new National Stadium located in the suburbs, etc., and based on the request of the Ministry of Education and Sports and the results of the field survey and consultation.

1) Design Policy on Facilities

a) Basic Policy on Utilization or Rebuilding of Existing Facilities

As a result of checking the existing framework, it was found that the deterioration was severe and there were safety issues as a structure. It was also found that the water supply capacity and drainage facilities were insufficient, the installation status of the existing facilities was unknown, and it was difficult to perform the necessary maintenance and management. For these reasons, the policy is to dismantle the existing stadium and build a new stadium instead of a partial renovation.

b) Site Selection

The project site is the site of the existing Chao Anouvong Stadium, and the stadium will be rebuilt by demolishing the existing track and field space, soccer field, main stand, back stand, side stand, and the office of the Sports Coordination Division, Elite Sports Department and Lao National Anti-Doping Organization, International Cooperation Department of the Ministry of Education and Sports.

c) Selecting Target Components

The rebuilt Chao Anouvong Stadium is planned to be used for track and field, soccer, rugby, para-track and field, para-soccer, and general sports. Facilities necessary for competitions and games of these sports will be developed. Other planned uses for athletes' training, strengthening training, training of referees and coaches, national ceremonies, cultural events such as International Yoga Day and the Japan Festival, privately sponsored sports and cultural events, and citizens' exercise will also be considered.

However, the new National Stadium, located on the outskirts of the capital, has a capacity of 25,000 people, so it is to be used for large-scale international competitions and matches, and professional sports, etc.

d) Setting the Scale

Considering that the Chao Anouvong Stadium, as a national sports facility, will host sports competitions and games at the highest level in Laos, and will be used to bring Lao sports to the global level, facilitating the training of elite athletes for world championships, the Olympic Games and Paralympic Games, as well as for referees and coaches, etc., the athletics field will conform to Construction Category IV, as indicated in the World Athletics (WA), Track and Field Facilities Manual 2019 EDITION. The soccer field will be sized according to International Federation of Association Football (FIFA) guidelines, and the rugby field size will adhere to World Rugby (WR) laws. In addition, the infield of the athletics stadium will be used for both soccer and rugby. The acquisition of World Athletics certification for the athletic track and field is not included in the scope of this project because of the extremely high construction precision required, and the high maintenance costs associated with renewing the pavement to maintain the certification.

Given the above international guidelines and laws, the site is small and space for constructing side stands cannot be secured to meet the setback regulations. Therefore, only the main stand and the rear stand will be constructed as spectator seats, which will number around 2,500.

The WA, FIFA and WR competition venue requirements for rooms and facilities focus on large-scale

international competitions such as the Olympic Games, World Athletics Championships, and the World Cup, and cannot be met by the scale of the stadium covered by this project. Therefore, the project will be planned to the extent necessary for the tournaments eyed for the use of the stadium covered by this project. In particular, the operation and administration offices, media and press-related facilities, and facilities and equipment necessary for television broadcasting intended for large-scale international competitions are excluded from the scope of the stadium due to its small scale.

e) Universal Design

In order to plan the stadium as a barrier-free sports facility, it will comply with the “the Accessibility Guide, October 2020 Edition” of the International Paralympic Committee (IPC) as much as possible regarding wheelchair seating, corridor widths, doors, handrails, lavatories, changing rooms, reception counters, and ramps at building entrances and exits, etc. However, automatic doors, flashing lights to notify the hearing impaired of emergencies, emergency call systems, auditory assistive systems for spectators, voice guidance devices for the visually impaired, etc., which are described in the Guide will not be included in this Project due to the difficulty of maintaining them. In the operation of the stadium, the Lao side is required to establish a system for guiding and assisting the hearing-impaired persons, visually-impaired persons, wheelchair users, and others in the use of facility or an emergency situation. For equipment, the Project assumes the procurement of products that are designed for safety and operability, rather than general fitness gym specifications, especially since the fitness equipment is expected to be used mainly by people with disabilities.

2) Design Policy on Equipment

The equipment is selected based on the minimal needs for training in the stadium, as well as operation and maintenance. The first priority is the rehabilitation and fitness equipment that is expected to be used by persons with disabilities, followed by the equipment used by track and field athletes, field maintenance equipment, and first aid equipment for injuries sustained during competition.

Equipment quantity is set in accordance with room capacities and track and field specifications. The quantity of equipment used for the competitions is determined based on the number of users and frequency of use.

In particular, since the fitness equipment is expected to be used by persons with disabilities, the equipment is planned considering safety and operability rather than the specifications for general fitness gyms.

3) Content and Scale

a) Facilities

Table–i Outline of the Project (Facility)

Facility	Improvement Plan	Floor Area
Running Track	9 lanes for 400m Standard Track 10 lanes for 100m and 110m Hurdles 1 Water jump for Steeplechase	11,305m ²
Jump Facility	2 Long and Triple Jump facility with landing area at each end	

	2 High Jump facility 3 Pole Vault facility with provision for landing area at each end	
Throwing Facility	2 Discus and Hammer Throw combined facility 2 Javelin Throw facility 2 Shot Put facility	
Soccer Pitch and Rugby Pitch	Soccer field: 105m x 68m Rugby, Field of play: 94m x 68m	7,385m ²
Total Floor Area of Competition Field		18,690m ²
Main Stand	1262 Spectator seating (1183 general seats, 22 wheelchair seats, 50 VIP seats, 7 VVIP seats) Changing room, Coach room, Referee room, Ball person room, Warm-up room, Fitness room, Medical science room, Medical and Doping control room, Office, Security room, First-aid room, Café, Shop, VIP room, VVIP room, Competition office, Office, Multipurpose room, kitchen, WC	3,698.43 m ²
Back Stand	1323 Spectator seating (1303 general seats, 20 wheelchair seats) Storage, Office, Multipurpose room, WC	3,014.02 m ²
Total Floor Area of Buildings		6,712.45m ²
Others	Large screen, Flagpole, Safety net, Floodlights (Relocation of existing lights)	N/A

Source: Study Team

b) Equipment

Table-ii Major Planned Equipment

Item No.	Equipment Name	Quantity	Item No.	Equipment Name	Quantity
1	Electrical muscle stimulation	1	35	Goal and net set for soccer	1
2	Ultrasound therapy machine	1	36	Flagpole	1
3	High/low plinth	2	37	Coach bench for soccer	1
4	Physical therapy bed	3	38	Rugby goal set	1
5	Parallel bar	1	39	Hurdle fences	1
6	Chair	6	40	Starting blocks for exercise	18
7	Partition	1	41	Equipment for running commands	1
8	Balance trainer	1	42	Color cards set	2
9	Upper body ergometer	2	43	Flag set	20
10	Mirror	1	44	Track number	1
11	Goniometer set	1	45	Relay baton for training	5
12	Elliptical trainer	1	46	Stopwatch	15
13	Stair-stepper	1	47	Video camera set	2
14	Stationary bicycle	1	48	Starter stand	2
15	Treadmill	1	49	Lap count indicator	1
16	Ankle weight	2	50	Tape measure	2
17	Accessible training bench	1	51	Throwing distance indicator	2
18	Dumbbell set	1	52	Rake	4
19	Barbell set	1	53	Protective cover for sandpit	4
20	Kettlebell set	1	54	Pole vault equipment	1
21	Pull-up frame and bar	1	55	High jump equipment	1
22	Fitness ball	1	56	Throwing platform	4
23	Foam roller	3	57	Throwing protection net set	2
24	Rehabilitation pole	1	58	Javelin set	1
25	Multi-station exercise machine	1	59	Plate set	1
26	Cable crossover	1	60	Ball set for shot put	1
27	Leg adduction/abduction machine	1	61	Hammer	1
28	Rubber gym tile	1	62	Roll tape	10
29	Ice machine	1	63	Lawn tractor	1
30	Mirror	1	64	Maintenance tool set	1
31	Side fence for blind soccer	1	65	Bed	2
32	Goal and net set for blind soccer	1	66	Wheelchair	2
33	Ball for blind soccer	10	67	Stretcher	2
34	Ball basket	2	68	Automated External Defibrillator (AED)	1

Source: Study Team

c) Soft Component

The Technical Unit of the Asset Management Division of the Permanent Secretary Office of the Ministry of Education and Sports will be responsible for the maintenance of the facilities and turf of the competition fields to be developed under this project. However, due to the limited number of staff, the current operation and maintenance of the stadiums is limited to monthly periodic inspections and inspections before the stadiums are used for competitions and events, etc. No manuals or checklists are maintained, and no records of inspections and maintenance are kept. In addition, maintenance of the turf of the playing field is limited to water sprinklers and replacing damaged turf, so the turf is not uniform, uneven, and of uneven hardness, and is not maintained in a safe condition for competition. Since the maintenance of the facilities developed under this project will be carried out using subcontractors, it is necessary to formulate a manual for the staff in charge to understand their duties as managers, and to outsource, manage, and record their work.

In addition, the Ministry of Education and Sports aims to develop the stadium as a barrier-free sports facility and to create an environment where people with disabilities have easy access, and to promote the use of the facility by the Laotian population in general, including those with disabilities. In order for users with disabilities and others to use the facility equally, safely, and comfortably, it is necessary to establish rules for use, such as separate days, times, and areas.

To ensure that the facilities developed under this project are properly operated and maintained, technical guidance will be provided to the staffs of the Asset Management Division of the Ministry of Education and Sports in the formulation of Lao language manuals for maintenance of the facilities and turf, and for promotion of use of the facilities by people with disabilities.

4. Implementation Schedule and Cost Estimation

The duration of the project is expected to be 32.0 months from detailed design to handover. Broken down: 10.0 months for detailed design and bidding-related work, 22.0 months for on-site facility construction and equipment procurement work, and 2.0 months for completion of soft components after handover. If this project is to be implemented with Japan's Grant Aid, the approximate project cost borne by the Lao side is estimated as 210 million yen.

The Lao side will be responsible for securing the land for construction of the project, bearing the tax exempted amount, various licensing procedures required for the implementation of the project, infrastructure installation, planting and general furniture procurement, bank charges, and other expenses.

5. Project Evaluation

Based on the following points, the project is deemed appropriate and eligible for Japanese Grant Aid.

1) Relevance

a) Meeting the Needs

The target facility of this Project is conveniently located in the heart of the capital Vientiane. Therefore,

it can easily be used for national competitions, Vientiane regional tournaments, daily exercise and games, and sports for the disabled, and it plays an important role in the promotion of sports for the population, as stated in the policy. In particular, the need for such a convenient facility is extremely high as it helps people with disabilities to be independent, participate in society, and to establish an inclusive society through sports. The implementation of this project will meet these needs.

b) Contribution to the Achievement of the Goals of the Country's Medium/Long-term Development Plans

This project is in line with the specific activities to achieve the “Development of Lao sport,” one of the priority activities to achieve Output 2: “Improved quality of all levels of education and conditions created for access to education to support readiness for regional and international integration and Industry 4.0” of Outcome 2: “Improved quality of human resources to meet development, research capacity, science and technology needs, and create value-added production and services” of the Ninth Five-Year National Socio-Economic Development Plan (2021-25) of Laos. It also contributes to Outcome 8 of the five-year Education and Sports Sector Development Plan 2021-2025: “The Lao people are healthy in mind and body, and sports professionals, amateur and professional athletes contribute to the improvement of the quality of sports and their status on the international stage, which gives pride to the Lao people.”

c) Consistency with Japan's Assistance Policy

In its policy of country-specific development cooperation with Lao PDR, Japan has set “Graduating from the LDC index” in the development of economic and social infrastructure as the overall goal, and Japan is providing assistance of building a society that is in harmony with the environment and culture for the priority areas of “Bridging the gap through balanced urban and rural development that takes into account environmental and cultural preservation”.

This project will contribute to the promotion of social inclusion and human security for people with disabilities, women, and others through the improvement of access to sports in the country by providing hard infrastructure (facilities and equipment) to develop the National Stadium, located in the center of the capital and with convenient access, as a stadium that complies with universal design.

In addition, the project will lead to support for the social advancement of all people, including those with disabilities, through sports, and will contribute to the improvement of the level of sports in Laos, such as success in the Olympics and international competitions. Thus, this project will contribute to strengthening the autonomous economic and social infrastructure of Laos.

2) Effectiveness

The target values expected from implementation of the Project are shown below.

a) Quantitative Effects

Since the interim results of Education and Sports Sector Development Plan 2021-2025 include an increase in the number of people playing sports and sports for people with disabilities, the

quantitative effects of the project will be 1) the number of all sports competitions and games held at the Chao Anouvong Stadium per year, and 2) the number of sports competitions and games for people with disabilities held there per year. In addition, in order to measure the frequency of use of the facilities developed by the Project, 3) the total annual number of users of the Chao Anouvong Stadium, including not only sports competitions and games, but also cultural events and citizen's exercise activities, etc., will be set. The quantitative effects of this Project are shown in the table below

Table-iii Quantitative Effects

Indicator		Baseline (2019)	Target (2028) (3 years after completion)
1	Number of tournaments and matches held at Chao Anouvong Stadium (excluding events, including sports for people with disabilities)	34 times/year	53 times/year
2	Number of sports tournaments and matches held for people with disabilities at Chao Anouvong Stadium	1 time/year	27 times/year
3	Number of people using the stadium (athletes and audiences participating in the tournaments and matches, participants of events, citizens regularly using the stadium)	100,000 persons	140,000 persons

Source: Study team (2021)

Regarding Indicator 1 and 2, due to the COVID-19 pandemic, there were no tournaments or matches held between 2020 and 2022, and Chao Anouvong Stadium is hardly used, so the number of tournaments and matches in 2019 is only applied as a reference value. The usage results of Chao Anouvong Stadium in 2019 are shown in the table below.

Table-iv No. of Matches, Tournaments, Events held at Chao Anouvong Stadium in 2019

Game	Host	No. of Matches/ Tournaments (2019)
Track & Field		
Annual Athletics competition	Lao Athletics Federation	1
Para-Track & Field		
Annual Para-Athletics competition	Lao Para Athletics Federation	1
Soccer		
AFF Suzuki Cup qualifying round	ASEAN Football Federation	1
Football Lao League 2	Lao Football Federation	8
Vientiane Capital Annual Football competition	Vientiane Capital Football Federation	4
Vientiane Capital Secondary School Football competition	Vientiane Capital Education and Sport Services	18
Rugby		
International Vientiane Rugby 10s Tournament	Lao Rugby Federation	1
Total		34

Event		
Lao Army Day Celebration	MOES	1
Lao Trade Union Day Celebration	MOES Trade Union	1
International Women's Day Celebration	MOES Women's Union	1
Lao People's Revolution Youth Organization Day Celebration	MOES Youth Organization	1
International Labor Day Celebration	MOES Trade Union	1
International Children's and National Arbor Day Celebration	MOES	1
Lao Women's Union Day Celebration	MOES Women's Union	1
International Day of Yoga	Embassy of India and MOES	1
Lao Sports Day Celebration	MOES	1
National Teacher's Day Celebration	MOES	1
Lao Against Drugs Day Celebration	MOES	1
Lao PDR National Day Celebration	MOES	1
Total		12
Overall		46

Source: MOES

The target values after three years of service shall be the utilization plan by the Ministry of Education and Sports as shown in the table below.

Table-v No. of Games, Competitions, Events to be Held at Chao Anouvong Stadium in 2029

Events	No. of Matches/ Tournaments, Events (2029)
Athletics	3
Soccer	20
Rugby	3
Total	26
Para-Athletics	8
Para-Soccer	17
Universal Sports	2
Total	27
Annual Events	12
Training	4
Private Events	12
Total	28
Grand Total	81

Source: MOES

Regarding Indicator 3, according to interviews with the Ministry of Education and Sports, the number of users of Chao Anouvong Stadium in 2019 was approximately 100,000 when the number of participants in games, competitions, and events listed in Table-iv and the number of citizens using the stadium for jogging and other activities are added. The estimated number of users after three years of service will be approximately 140,000, when the number of participants and audiences in the usage plan shown in Table 2-3 is multiplied by the number of events held per year.

b) Qualitative Effects

- a) Improvement of safety, convenience, and hygiene in the use of facilities and equipment.

- b) The quality of para-athletics activities will be improved.
- c) Opportunities for persons with disabilities to participate in society will be expanded.
- d) The living environment of citizens in terms of culture and health will be improved.

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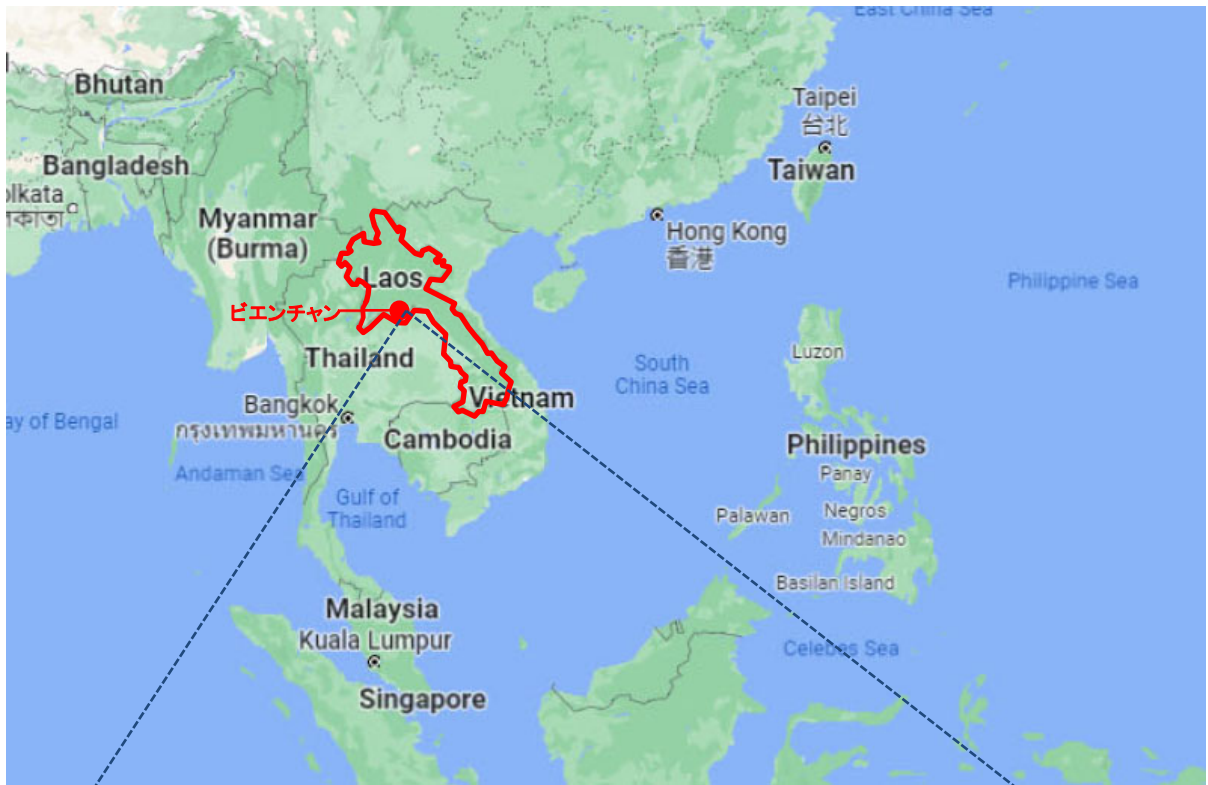
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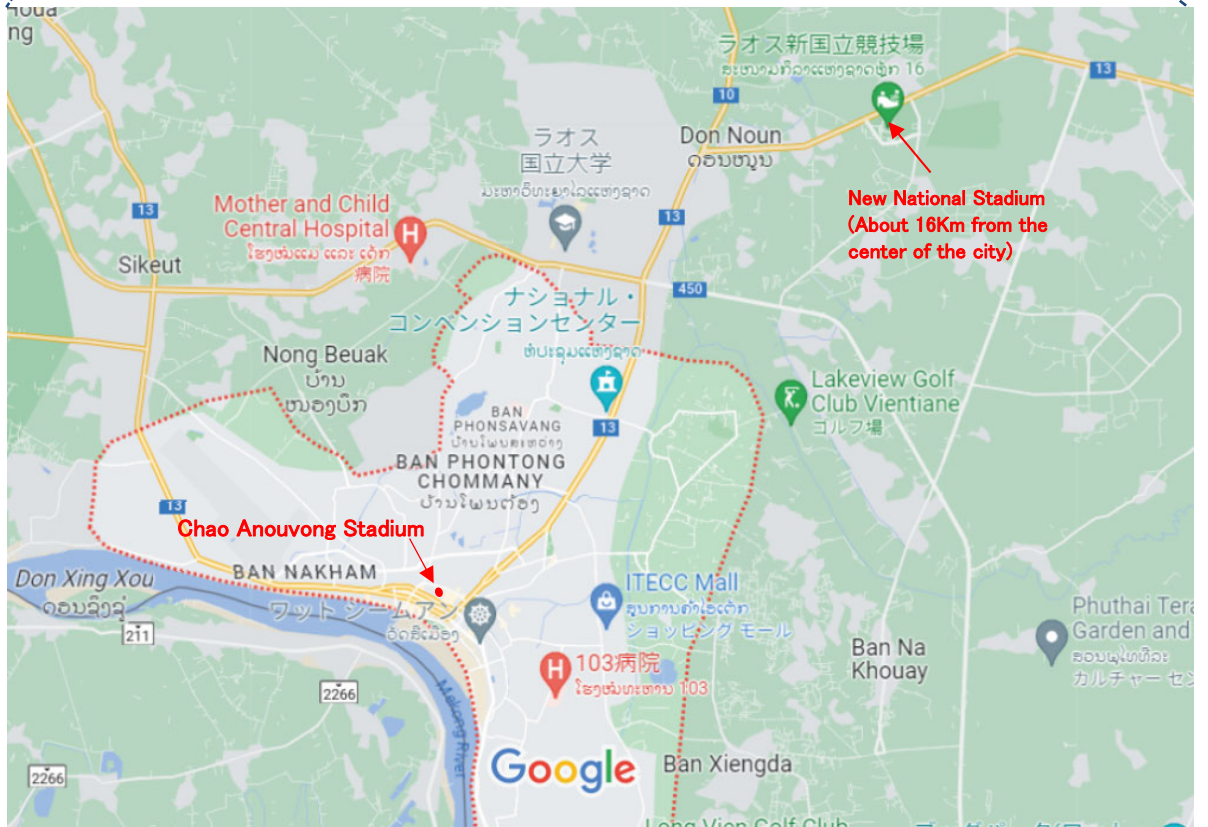
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Project Location Map



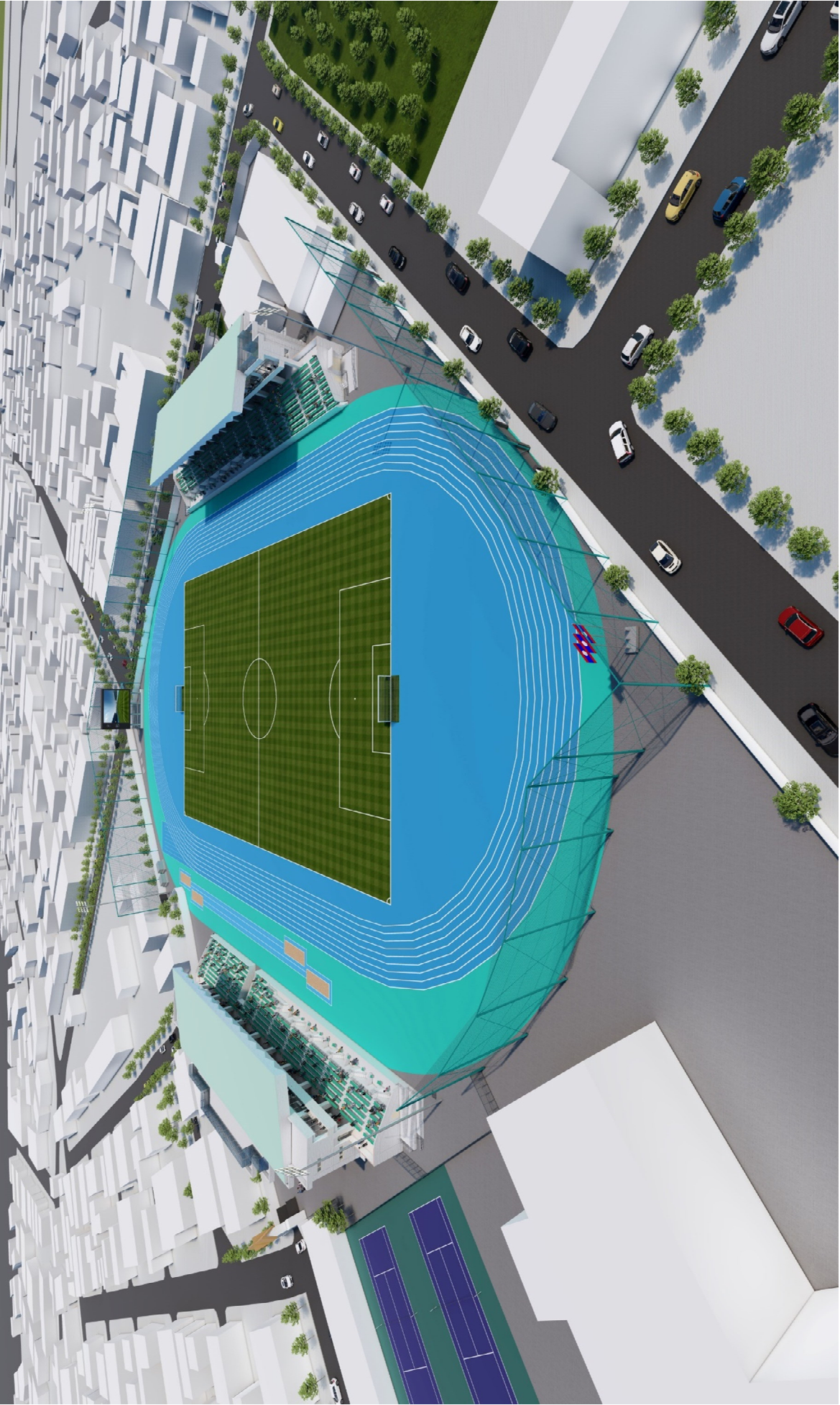
Map of Lao PDR



..... Vientiane Urban Area

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Area Map of Vientiane



Visualization of Completed Stadium

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Abbreviations

Abbreviation	Language	Term
ADB	English	Asian Development Bank
ADDP	English	Asia Development with Disabled Persons
AFC	English	Asian Football Confederation
AFF	English	ASEAN Football Federation
ASEAN	English	Association of Southeast Asian Nations
BH	English	Borehole
DAC	English	Development Assistance Committee
ECC	English	Environmental Compliance Certificate
E/N	English	Exchange of Notes
ESDP	English	Education Sector Development Plan
ESIA	English	Environmental and Social Impact Assessment
ESMMP	English	Environmental and Social Monitoring and Management Plan
ESSDP	English	Education and Sports Sector Development Plan
FIFA	English	International Federation of Association Football
G/A	English	Grant Agreement
GDP	English	Gross Domestic Product
GL	English	Ground Level
IAAF	English	International Association of Athletics Federations
IEE	English	Initial Environmental Examination
IMF	English	International Monetary Fund
IOC	English	International Olympic Committee
IPC	English	International Paralympic Committee
JASS	English	Japanese Architectural Standard Specification
JIS	English	Japanese Industrial Standard
LAN	English	Local Area Network
LDC	English	Least Developed Country
MDGs	English	Millennium Development Goals
MPWT	English	Ministry of Public Works and Transportation
MOES	English	Ministry of Education and Sports
MoNRE	English	Ministry of Natural Resources and Environment
NGO	English	Non-Governmental Organization
NPC	English	National Paralympic Committee of Laos
NSEDP	English	National Socio-Economic Development Plan
ODA	English	Official Development Assistant
OECD	English	Organisation for Economic Co-operation and Development
SDGs	English	Sustainable Development Goals
SEA GAMES	English	South East Asian Games
SFT	English	Sport for Tomorrow
UNDP	English	United Nations Development Program
VAT	English	Value Added Tax
VIP	English	Very Important Person
VVIP	English	Very Very Important Person
WA	English	World Athletics

Chapter 1. Background of the Project

Chapter 1. Background of the Project

1-1 Background and Outline of the Request for Grant Aid

Located in the heart of Vientiane, the capital of Laos, Chao Anouvong Stadium is a symbol of the historic city. It was built in 1950 as the National Stadium at the time (renovation work was carried out in 2006). The government of Lao PDR and the Ministry of Education and Sports have positioned “improving the quality of life” and “urban development” as priority goals in the “Ninth Five-Year National Socio-Economic Development Plan (2021-2025)” and the “Education and Sports Sector Development Plan 2021-2025,” and have promoted the social participation of people in socially difficult situations, the health promotion of citizens, and the development of world-class athletes. In addition, expanding sports facilities in order to spread the values of inclusiveness and diversity through urban development that fuses sports and culture is another policy action.

Although the new National Stadium was built in the suburbs of Vientiane in 2009 and has been used mainly for the purpose of holding international competitions, Chao Anouvong Stadium continues to be used for various events for the public and athletes, in addition to sports (soccer and rugby) and para-athletic competitions and practices, due to its name recognition and convenient location. Due to its easy access in the center of the city, there is a high need for general use, and it has also contributed to urban and cultural development integrated with civic life. However, the aging of the facilities is serious, and there is a shortage of facilities and equipment suitable for the use of athletes, including people with disabilities and the public. This hinders the safe and smooth operation of the facilities.

Under these circumstances, the project for the reconstruction of the Chao Anouvong Stadium in the capital city was requested in order to enhance the barrier-free functions and improve the safety of the facilities by refurbishing the stadium and its ancillary facilities and equipment. The aim is to promote the use of the stadium by athletes and a wide range of citizens, thereby contributing to the social participation of persons with disabilities, the furthering of sports and cultural activities and improvement of urban environment in Laos.

1-2 Trends in Japanese Assistance

Since 1975, Japan has been assisting the promotion of culture and higher education, the preservation of cultural heritage, and the promotion of sports in developing countries through cultural Grant Aid. Specifically, it has provided facilities and necessary equipment for cultural and sports-related facilities and higher education and research institutions in developing countries, as well as equipment for the restoration, preservation, and utilization of cultural relics and cultural properties, and has developed facilities.

In September 2013, in a presentation at the International Olympic Committee (IOC) General Assembly, Japan announced the Sport for Tomorrow (SFT) program as an international contribution measure in the field of sports. During the seven years between 2014 and 2020, SFT aimed to spread the value of sports and the Olympic and Paralympic Movement to more than 10 million people in more than 100 countries,

including developing countries, to people of all generations, including the youth, who shoulder the responsibility for the future, for a better future globally.

SFT consists of the following three pillars:

1) International Cooperation and Exchange through Sport

2) Academy for Tomorrow's Leaders in Sport

3) "PLAY TRUE 2020" to develop sport integrity through strengthening global anti-doping activities

Development of the sports-related facilities and the provision of equipment are included in "International Cooperation and Exchange through Sports."

The program reached its goal of 10 million people in more than 100 countries and regions at the end of September 2019, and was extended by one year due to the one-year postponement of the 2020 Tokyo Olympic and Paralympic Games, and ended in 2021.

Table 1-1 Japanese Grant Aid Projects (Education and Sports Sector)

Activities	Organizations
1 International Cooperation and Exchange through Sport	
Development of sports-related facilities and provision of equipment	Japanese Cultural Grant Aid and Grassroots Human Security Project
Dispatch and invitation of sports coaches and athletes	JICA Volunteer Dispatch, Sports Diplomacy Promotion Project
Technical Cooperation in the Field of Sports	JICA Technical Cooperation
Introduction of Japanese culture and support for human resource development in the field of sports	Dispatch and invitation of experts from The Japan Foundation projects and cultural projects at diplomatic missions abroad
Support for both hardware and software, such as for the formulation of school physical education curricula and for sports events	Ministry of Foreign Affairs of Japan and Japan Sports Agency
2 Academy for Tomorrow's Leaders in Sport	
In order to disseminate Olympism and promote sports medical science research in cooperation with the IOC, the Japan Olympic Committee (JOC), national sports organizations (NF), physical education universities, etc., IOC officials and others will be invited as faculty members, etc., and a core base will be established to accept and train human resources who are expected to play an active role in the international sports world.	Ministry of Education and Sports
3 "PLAY TRUE 2020" to develop sport integrity through strengthening global anti-doping activities	
We will contribute to the eradication of doping in sports around the world through the introduction and dissemination of anti-doping education and training packages in countries where anti-doping activities are lagging, human resource development support, research and development to support them, and holding international conferences and symposiums. In addition, in order to support the advancement of anti-doping research, we contributed funds to the World Anti-Doping Organization (New Research Fund).	Ministry of Education and Sports

Source: "Sports for Tomorrow (SFT)" Program by the Ministry of Foreign Affairs of Japan

In its policy of country-specific development cooperation with Lao PDR, Japan has set "Graduating from the LDC index" in the development of economic and social infrastructure as the overall goal. Japan is providing assistance of building a society that is in harmony with the environment and culture for the priority areas of "Bridging the gap through balanced urban and rural development that takes into account

environmental and cultural preservation” through the assistance in promoting sports for people with disabilities in Laos, developing emotional education and promoting culture, expanding the field of sports and martial arts, and improving competitive ability.

In addition, Japan provides assistance in strengthening governance, transportation and transportation networks, electric power generation, bolstering educational infrastructure, private-sector development, agricultural development, urban environment improvement, forest conservation and climate change countermeasures, and strengthening health and medical services.

Basic Aid Policy (Main Goal):

Strengthening Self-Sustaining Economic and Social Infrastructure to Graduate from LDC Status

Priority Areas (Medium-term Objectives):

- 1) Strengthening governance, including fiscal stability, and responding to cross-sectoral issues
- 2) Strengthening connectivity with neighboring countries on both hard and soft terms
- 3) Diversifying industries, strengthening competitiveness, and developing industrial human resources for this purpose
- 4) Reducing disparities through balanced urban and rural development that takes environmental and cultural preservation into consideration

Other Individual Projects:

- 1) Promotion of sports for persons with disabilities in Laos
- 2) Development of emotional education and cultural promotion, expansion of sports and martial arts, and improvement of competitive ability

In addition, the JICA medium-term goal (2017-2022) and JICA Global Agenda (JICA’s 20 Strategies for Global Development) “Sports and Development” call for strengthening development assistance through sports.

According to the Official Development Assistance (ODA) Country Data Collection 2022, Japan’s assistance to Laos was 4,079 billion yen in Grant Aid and 2.974 billion yen in technical cooperation in fiscal year 2021, and no financial assistance has been implemented. The cumulative total through fiscal 2021 is 173.585 billion yen in Grant Aid, 84.872 billion yen in technical cooperation, and 48.436 billion yen in loan-based cooperation, with the largest amount of Grant Aid.

The results of Grant Aid, financial aid and technical cooperation in the field of education and sports with the Lao PDR are shown in Tables 1-2 to 1-4.

Table 1-2 Japanese Grant Aid Projects (Education and Sports Sector)

Implementation Year	Project Name	Cost (100 million yen)	Summary
2020	The Project for Improving Teacher Training Colleges	19.12	
2019	Provision of Sports Equipment for Athletes with Disabilities	0.02	Grant Assistance for Cultural Grassroots Projects

2017	The Project for Improving Secondary School Environment in the Central and Southern Provinces	13.69	
2014	Improvement of Sikhay – Japan Budo Center	0.09	Grant Assistance for Cultural Grassroots Projects
2014	The Project for Improving Secondary School Environment in the Southern Provinces	10.69	
2010	The Project for the Improvement of School Environments in Champasack and Savannakhet Provinces	10.18	
2009	The Project for Improvement of School Environments in Three Southern Provinces	6.85	
2008	The Project for the Construction of Lao-Japan Budo Center (Phase 2)	2.02	Cultural Grant Assistance
2008	The Project for Construction of a Multipurpose Gymnasium for Physical Education Teacher Training School	-	Grant Assistance for Cultural Grassroots Projects
2007	The Project for the Construction of Lao-Japan Budo Center	4.00	Cultural Grant Assistance
2004	The Project for Construction of Primary Schools (Phase II)	4.25	
2003	The Project for Construction of Primary Schools (Phase I)	3.33	
2002	Provision of karate equipment to the National Sports Commission	-	Grant Assistance for Cultural Grassroots Projects

Source: JICA, Embassy of Japan in the Lao PDR

Table 1-3 Japanese ODA Loan Projects (Education and Sports Sector)

Implementation Year	Project Name	Summary
	N/A	

Source: JICA

Table 1-4 Japanese Technical Cooperation Projects (Education and Sports Sector)

Implementation year	Project name	Summary
2022 .1 – 2027.1	Practice of inclusive education and employment support for social independence of children with intellectual and developmental disabilities	Support for the establishment and operation of inclusive education teacher training courses at two teacher training schools, support for the establishment and operation of inclusive education resource centers in two regions, and support for the establishment of inclusive education model schools (public) in two regions and practical support for teachers at the model schools for teaching individual students for employment in collaboration with the resource centers.

2020.12 – 2025.11	Project for Strengthening Human Resource Development of Engineering and Technology for Industry Development in Lao PDR	Strengthening education and improving quality in the fields of electrical/electronics, machinery, and civil engineering at the Faculty of Engineering, National University of Laos for the development of the mining and construction industries
2016.8 - 2021.12	Sports Promotion for people with Disabilities and Capacity Building of Sports Trainers and Sports Experts in Laos PDR	Establishment of a support system to promote sports for people with disabilities through training of grassroots and para-sports instructors, referees, etc., formulation of certification systems and instructional manuals, and dissemination activities.
2016.2 – 2022.3	Project for Improving Teaching and Learning Mathematics for Primary Education	Development of math teaching materials, strengthening of teacher training schools, and improvement of quality of math lessons
2012.9 – 2016.8	Project for Supporting Community Initiative for Education Development (Phase 2)	Strengthening the capacity of the Ministry of Education and Sports, Prefectural Education Bureau, and County Education Bureau and improving access and quality of education in the four southern prefectures
2012.7 – 2015.6	Supporting the social independence of people with disabilities in Northern Laos through employment support projects	Providing support for employment and entrepreneurship in Luang Prabang, including sports programs to promote the empowerment and skills training of people with disabilities, , vocational counseling, and job coaching.
2010.2 – 2013.10	Project for Improving In-service Teacher Training for Science and Mathematics Education	Support for in-service teacher training at the prefecture/county level
2009.4 - 2012.3	Sports Promotion for People with Disabilities in Laos PDR	Strengthening the functions of the Paralympic Committee, supporting planning and implementation of the Paralympic Committee's business plan
2000.9 – 2007.8	Development of the Faculty of Economics and Management of National University of Laos	Strengthening the operation management system, improving the quality of teaching staff, improving the ability of human resources to promote the market economy by developing and improving curricula and teaching materials

Source: JICA

1-3 Environmental Conditions

(1) Weather

Vientiane has a Savanna climate with the Köppen climate classification of Aw, with the rainy season from April to October and the dry season from November to March. There are few changes in temperature throughout the year, with average temperatures ranging from 22°C to 29°C, average maximum temperatures in the range of 28-34°C, and average minimum temperatures in the range of 17-25°C. The hottest month in Vientiane is April, the last month of the dry season, when the maximum temperature rises up to around 40°C. The average relative humidity is 66-84%. Rainfall is concentrated in May through September, accounting for about 86% of the year's rainfall. Peak rainfall reaches about 334.6 mm in August. (Source: World Meteorological Organization)

The average wind speed is 7.1 to 9.8 km/h, and the wind intensifies from November to April and often blows from the east. The winds are strongest in February, with an average hourly wind speed of 9.8 km/h. (Source: Weather Spark)

**Table 1-5 Meteorological Data for Vientiane
(Average in 50 years between 1951 and 2000)**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Maximum Temperature (°C)	35.6	37.8	40.0	41.1	38.9	37.8	36.1	37.2	38.9	38.9	34.4	33.4	-
Average Max. Temperature (°C)	28.4	30.3	33.0	34.3	33.0	31.9	31.3	30.8	30.9	30.8	29.8	28.1	31.1
Average Min. Temperature (°C)	16.4	18.5	21.5	23.8	24.6	24.9	24.7	24.6	24.1	22.9	19.3	16.7	21.8
Minimum Temperature (°C)	0.0	7.6	12.1	17.1	20.0	21.1	21.2	21.1	21.2	12.9	8.9	5.0	-
Precipitation (mm)	7.5	13.0	33.7	84.9	245.8	279.8	272.3	334.6	297.3	78.0	11.1	2.5	1661
Rainy Days (days)	1	2	4	8	15	18	20	21	17	9	2	1	118
Average Humidity (%)	70	68	66	69	78	82	82	84	83	78	72	70	-
Monthly Insolation (hours)	254.4	214.3	216.8	226.3	207.1	152.9	148.6	137.1	137.7	247.7	234.3	257.5	2,434.7

Source: World Meteorological Organization

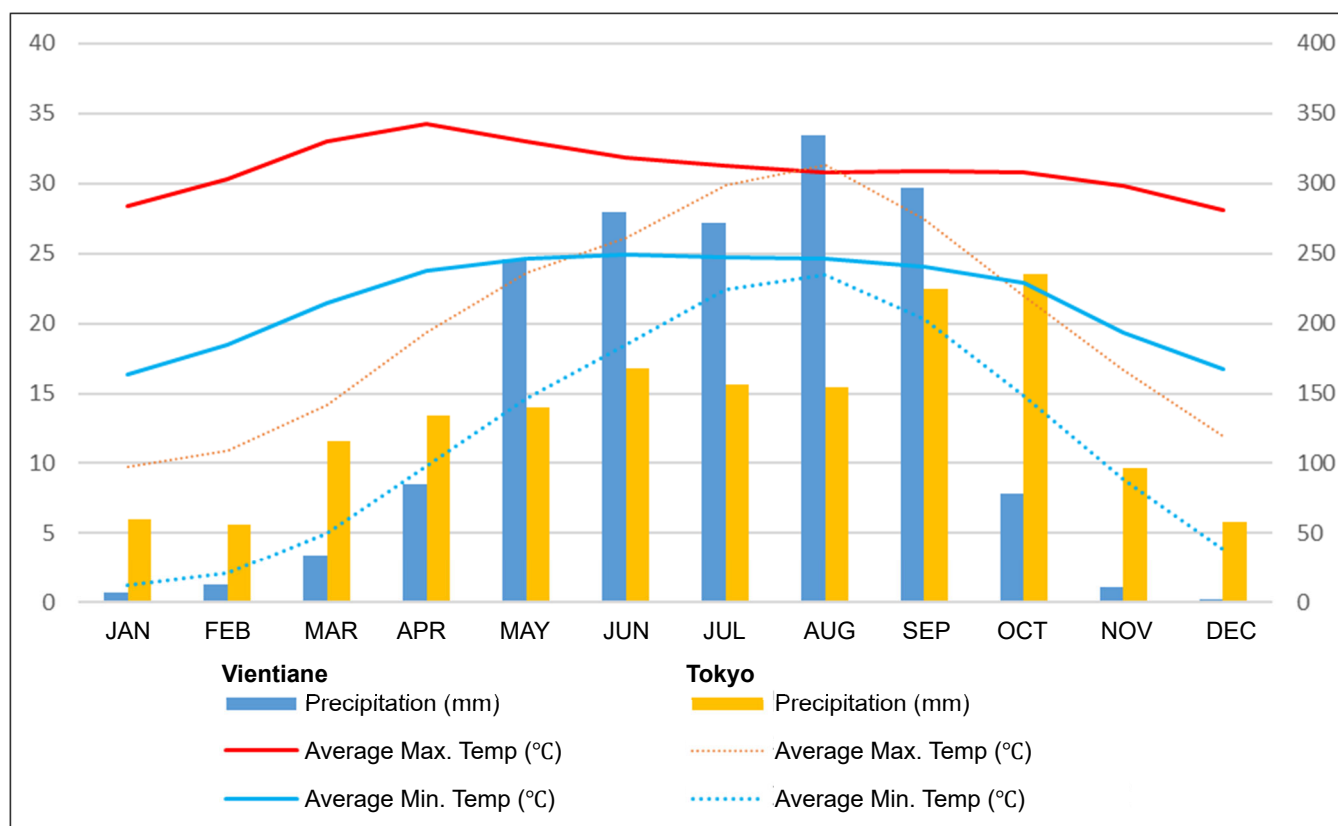


Figure 1-1 Meteorological Data in Vientiane (2021)

(2) Natural Disasters

Disaster risks in Lao PDR are flood, drought, earthquake, storm, epidemic, UXO, and landslide (National Risk Profile of Lao PDR November 2010, National Disaster Management Committee, Government of Lao PDR), and those directly related to the facility planning of this project are floods, earthquakes, and storms.

Floods and flood damage occur frequently, especially in the central and southern parts of the country. In central Vientiane, where the project site is located, there were major floods in 1960 and 1966 caused by the overflowing of the Mekong River, but no serious damage has been observed in recent years.

Earthquakes occur in northern Laos, near the border with Thailand and Myanmar, and in 2019 a quake measuring magnitude 6.1 occurred with the epicenter near Xayaboury Province in northwestern Laos. In December 2021, a magnitude 5.8 earthquake occurred with the epicenter in the same area. Back in 2011, a major quake of about 7.0 magnitude was experienced with the epicenter at 111 km north of Chiang Rai in Thailand (in Myanmar).

The National Risk Profile of Lao PDR indicates that Vientiane is at risk of experiencing a strong earthquake in the Mercalli intensity scale (Felt by all, and many are frightened. Some heavy furniture is moved; a few instances of fallen plaster occur. Damage is slight.) with a 250-year return period.

In the past, Laos has witnessed several storms from tropical depression (velocity 0-62 km/hr) to very strong storms which has its velocity of 178 – 209 km/hr. Recently, in September 2009, Tropical Storm Ketsana brought very heavy rainfall to southern Laos and caused extensive flooding damage. The National Risk Profile of Lao PDR indicates that Vientiane is at risk of a tropical storm (1 minute average wind speed 63 -118 km/hr) with a 50-year return period.

(3) Natural Environment Survey

1) Topographical Surveys

Topographic surveys were conducted on the entire site of the existing Chao Anouvong Stadium and surrounding roads. The Chao Anouvong Stadium site connects to roads on the north and east sides, the ancillary facilities on the south side and the Lao-Japan Budo Center and residential houses on the west side. On the southwest sides of the site, a road leads to the main entrance of the stadium. The survey shows the site is generally flat, but it is about 1 meter lower than the northern front road (Boulevard Khounboulom).

2) Geological Survey

Boring and standard penetration tests were conducted at five locations within the Project site. As a result of the test, silt clay was found up to about 5m down from the surface, sandy clay up to about 5-15m, and gravel mixed with sandy clay was at a depth beyond that. It has a depth of about 14.5m and an N value of 30.

1-4 Environmental and Social Considerations

Since this Project is the extension of renovation work on the site of the existing stadium, and has little environmental and social impact on the site and the surrounding area, the classification in the “JICA Guidelines for Environmental and Social Consideration” is “Category C.”

In order to apply for a building permit for the Project, an Environmental Compliance Certificate (ECC) issued through the approval of an Environmental and Social Impact Assessment (ESIA) report and an Environmental and Social Monitoring and Management Plan (ESMMP) must be attached. In Laos, the ESIA system is relatively new and it began to be strictly applied around 2010. Although projects are divided into Group 1, which is a relatively minor application, and Group 2, where monitoring is necessary even after construction and the examination process is long, the sports complex subject to this Project is classified as Group 2.

The Environmental Compliance Certificate is issued through investigation and analysis, public hearings, report preparation, and technical review, starting with screening. This process takes approximately 10 months. In accordance with Lao law, it is necessary to hire a professional consultant who has a license in Laos for this particular work.

1-5 Other (Global Issues, etc.)

Regarding the role of sports in society, the 2030 Agenda Declaration for Sustainable Development (SDGs preamble) states that sports are also an important key to sustainable development. We recognize that sports can contribute to development, peace, health, education, and social inclusion, as well as the empowerment of women and youth and capacity development of individuals and communities by promoting tolerance and dignity in sports. It emphasizes the importance of sports. Furthermore, among the 17 goals of the SDGs, Goals 3, 4, and 5 are particularly relevant. First, in Goal 3, “Health and Welfare for All,” it is recognized that exercise and sports are important elements of a fulfilling lifestyle and mental well-being, and they can contribute to the prevention of risks, such as non-communicable diseases. Sports can also serve as an educational tool for sexual and reproductive and other health issues. Although Goal 4 focuses on “quality education,” physical education and sports activities are believed to be able to improve school-age children’s enrolment, attendance, and grades. In addition, sports-related educational programs can be a basis for learning opportunities after elementary and secondary education and for acquiring skills that can be applied in the workplace and social life. Finally, Goal 5 is “gender equality.” When sports initiatives and programs provide opportunities for girls to acquire the knowledge and skills they need to advance into society, sports are believed to be a tool for transforming existing unequal gender roles and relationships and promoting equality.

JICA’s Global Agenda for Sport and Development also stipulates as its objective “to promote the realization of a peaceful society where all people can equally choose to enjoy sport regardless of gender, age, culture, social or economic status, or disability”.

Chapter 2. Contents of the Project

Chapter 2. Project Contents

2-1 Basic Concept of the Project

2-1-1 Overall Goal and Project Goal

By strengthening the barrier-free functions and improving the safety of the facilities through the reconstruction of the Chao Anouvong Stadium and its ancillary facilities and equipment, the Project aims to promote the use of the stadium by athletes and a wide range of citizens, thereby contributing to the promotion of social participation of persons with disabilities, the furthering of sports and cultural activities, and improvement of urban environment.

Table 2-1 Overall Goal and Project Goal

Goals and Achievements	Contents
Overall Goal	Promotion of social participation of persons with disabilities and promotion of sports and cultural activities and improvement of urban environment
Project Goal	Promotion of the use of Chao Anouvong Stadium by athletes and a wide range of citizens, including those with disabilities
Project Results	Enhancement of Chao Anouvong Stadium as a barrier-free facility and improvement of safety

2-1-2 Outline of the Project

In order to achieve the above goal in this Project, the Chao Anouvong Stadium, as a barrier-free sports facility is to be developed.

The following is an overview of the contents of the improvement of facilities and equipment to be implemented in the Project.

(1) Facilities

The following table shows the outline of the facility's improvement plans.

Table 2-2 Outline of the Project (Facilities)

Facility	Improvement Plan	Floor Area
Running Track	9 lanes for 400m Standard Track 10 lanes for 100m and 110m Hurdles 1 Water jump for the Steeplechase	
Jump Facility	2 Long and Triple Jump facility with landing area at each end 2 High Jump facility 3 Pole Vault facility with provision for landing area at each end	11,305m ²
Throwing Facility	2 Discus and Hammer Throw combined facility 2 Javelin Throw facility 2 Shot Put facility	
Soccer Pitch and Rugby Pitch	Soccer field: 105m x 68m Rugby, Field of play: 94m x 68m	7,385m ²
Total Floor Area of Competition Field		18,690m ²
Main Stand	1262 Spectator seating (1183 general seats, 22 wheelchair seats, 50 VIP seats, 7 VVIP seats) Changing room, Coach room, Referee room, Ball person room, Warm-up room, Fitness room, Medical science room, Medical and Doping control room, Office, Security room, First-aid room, Café, Shop, VIP room, VVIP room, Competition office, Office, Multipurpose room, kitchen, WC	3,698.43 m ²

Back Stand	1323 Spectator seating (1303 general seats, 20 wheelchair seats) Storage, Office, Multipurpose room, WC	3,014.02m ²
Total Floor Area of Buildings		6,712.45m ²
Others	Large screen, Flagpole, Safety net, Floodlights (Relocation of existing lights)	N/A

(2) Equipment

The Project includes 30 pieces of rehabilitation and fitness equipment, 32 pieces of track and field competition equipment, and 6 pieces of stadium operation and maintenance equipment. All planned equipment will be installed or delivered within the Chao Anouvong Stadium facility.

(3) Technical Assistance (Soft Component)

The Technical Unit of the Asset Management Division of the Permanent Secretary Office of the Ministry of Education and Sports will be responsible for the maintenance of the facilities and turf of the competition fields to be developed under this project. However, due to the limited number of staff, the current operation and maintenance of the stadiums is limited to monthly periodic inspections and inspections before the stadiums are used for competitions and events, etc. No manuals or checklists are maintained, and no records of inspections and maintenance are kept. In addition, maintenance of the turf of the playing field is limited to water sprinklers and replacing damaged turf, so the turf is not uniform, uneven, and of uneven hardness, and is not maintained in a safe condition for competition. Since the maintenance of the facilities developed under this project will be carried out using subcontractors contracted by the Asset Management Division, it is necessary to formulate a manual for the staff in charge to understand their duties as managers, and how to outsource, manage, and record their work.

In addition, the Ministry of Education and Sports aims to develop the stadium as a barrier-free sports facility and to create an environment where people with disabilities have easy access, and to promote the use of the facility by the Laotian population in general, including those with disabilities. In order for users with disabilities and the non-disabled to use the facility equally, safely, and comfortably, it is necessary to establish rules for use, such as separate days, times, and areas.

In response to these needs, and to ensure that the facilities developed under this project are properly operated and maintained, technical guidance will be provided to the staffs of the Asset Management Division of the Ministry of Education and Sports in the formulation of Lao language manuals for maintenance of the facilities and turf, and for promotion of use of the facilities by people with disabilities.

2-2 Outline Design of the Japanese Assistance

2-2-1 Design Policy

(1) Basic Policy

1) Basic Policy on Utilizing Existing Facilities or Rebuilding

a) Existing Structure

In 1961, the main stand (located in the center), back stand, and side stands of the existing facility

were constructed with reinforced concrete, and in 1998, spectator seats and rooms were added on both sides of the main stand. More than 60 years have passed since the construction of the central part of the main stand, and more than 20 years have passed since the construction of both sides of the main stand, and it was confirmed that they were in a considerably deteriorated state. In the site survey, three types of inspections, such as visual, hammering, and Schmidt hammer, were carried out to confirm the degree of deterioration of the existing frame. The purpose of each inspection is to confirm the state of damage that appears on the surface (emergence of rebar, rust, and concrete cracks) by visual inspection, and to estimate the condition inside the structural frame by hammering tests (exfoliation of concrete and concrete casting condition) and confirmed the compressive strength of concrete by Schmidt hammer tests.

As a result of each inspection, visual inspection confirmed 1) corrosion of the reinforcing steel bars (progress of significant corrosion), 2) exfoliation of the concrete surface because of the corrosion of the reinforcing bars, and 3) the appearance of cracks and stains by corrosion on the concrete surface. In the hammering test, 4) the porous state inside the structural concrete and 5) the exfoliation and flaking of the concrete were confirmed. By the Schmidt hammer test, 6) at least 27Mpa, and 40Mpa or more compressive strength of concrete in most parts was confirmed, although there were variations in each part, because the age of the concrete was at least 20 years. In particular, the confirmed phenomena 1) to 4) are presumed to be problems caused by the construction quality at the time of building, therefore it is assumed that the entire existing structure has the same situation. Considering these inspection results, the concrete is assumed to retain its strength to bear the shear stress as its compressive strength seems to exceed the design parameters, but the structural frame is severely degraded due to the bending force that acts on it. Hence, the safety of the structural frame cannot be confirmed against vertical stress (weight of spectators and installed equipment) and horizontal stress (wind pressure and seismic force). In addition, considering the overall deterioration of the structural frame due to the initial construction quality, it is not possible to guarantee the safety of the frame by partial renovation, so the existing facility must be dismantled and rebuilt.

b) Existing Facilities

The biggest problem with the existing facilities is that wiring and piping cannot be inspected or repaired because drawings and maintenance records have not been maintained and kept. There are also many other problems, such as water tank facilities with insufficient water supply, insufficient water pressure to supply the entire facility, septic tank facilities that cannot be cleaned regularly, and drainage facilities with inadequate capacity and slope. In particular, periodic inspection reports are required for drainage. Because the existing facilities are in such a state, it is difficult to drastically improve the current problems through partial repairs and renovations, so the entire facility must be re-planned and rebuilt.

2) Policy on Site Selection

As shown in the figure below, the Project site is located within the existing Chao Anouvong Stadium premises, and the existing athletics track, soccer field, main stand, back stand, side stand, and the office of the Sports Coordination Division, Elite Sports Department and Lao National Anti-Doping

Organization, International Cooperation Department of the Ministry of Education and Sports will be demolished and the stadium will be rebuilt.

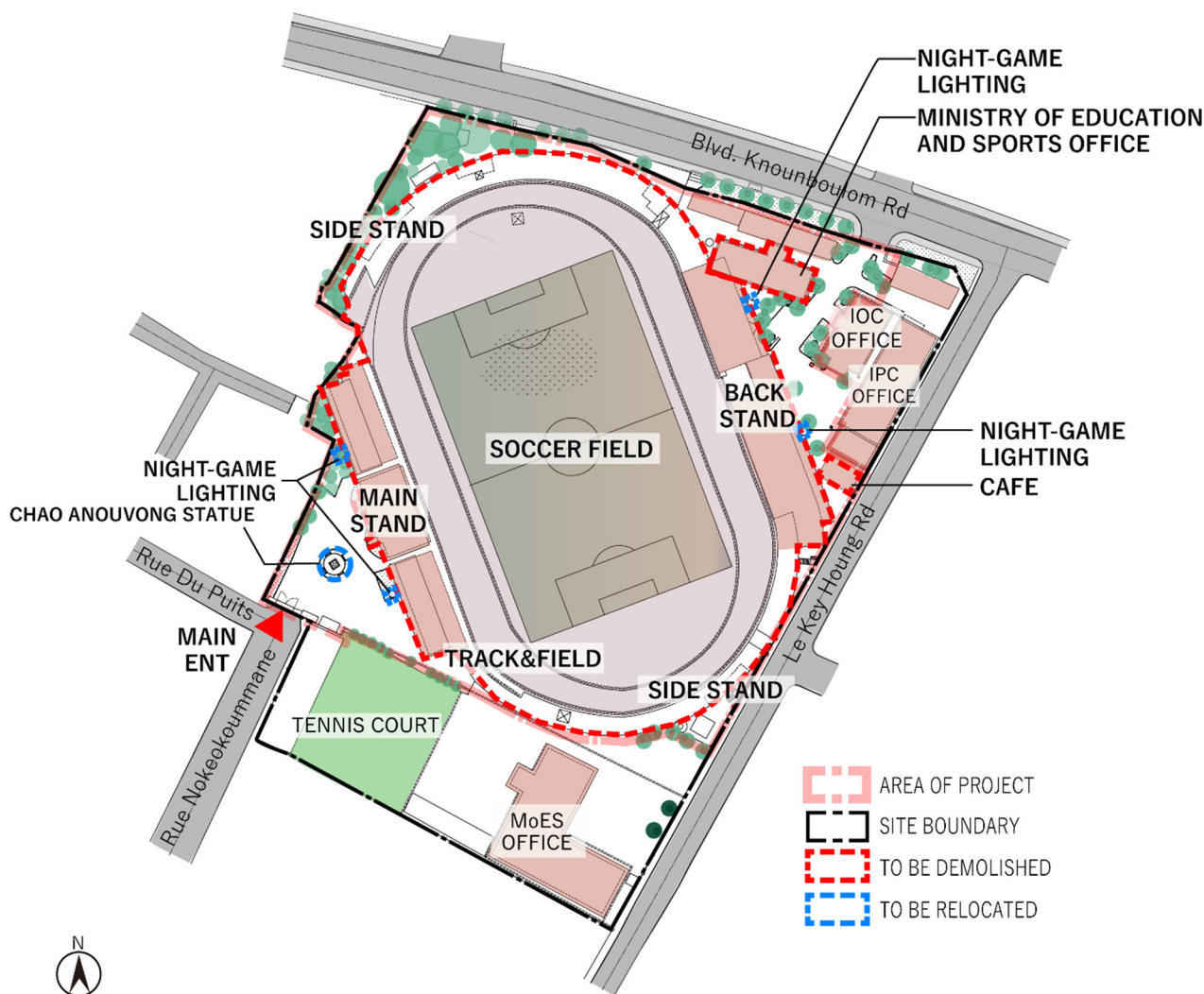


Figure 2-1 Project site

3) Policy on Facilities

a) Facility Usage Plan

As shown in the table below, Chao Anouvong Stadium is planned to be used mainly for national competitions of track and field, soccer, rugby, para-track and field, para-soccer, and universal sports after the reconstruction. As for international competitions, it is necessary to consult with and obtain the approval of the organizer, qualifiers of Southeast Asian regional soccer tournament, and small international rugby tournaments are planned. Other planned uses for athletes' training, strengthening training, training of referees and coaches, national ceremonies, cultural events such as International Women's Day, International Labor Day and the Japan Festival, privately sponsored sports and cultural events, and citizens' exercise will also be considered.

However, the New National Stadium, located on the outskirts of the capital, has a capacity of 25,000 people, so it is used for large-scale international competitions, matches, and professional sports, etc.

Table 2-3 The Usage Plan of Chao Anouvong Stadium After Rebuilding

	Event	Organizer	Estimated No. of Participants (Persons)	Estimated Audience No. (Persons)	No. of Events per Year (Times)
Athletics	Domestic Athletics Competitions	Lao Athletics federation	230	600	2
	Vientiane Marathon	Lao Athletics federation and Private Agency	3,500	-	1
Soccer	Vientiane Capital Secondary School Football Competition	Vientiane Capital Education and Sports Service	60	1,200	4
	School/College soccer activities	MOES	60	700	5
	Lao League 2	Lao Football Federation	50	1,800	8
	International/Regional Soccer Competitions (ASEAN Football Championship Qualifying etc.)	Lao Football Federation	60	3,800	3
Rugby	Domestic Rugby Competitions	Lao Rugby Federation	28	300	2
	International/Regional Rugby Competition (Vientiane 10s Rugby Championship, etc.)	Lao Rugby Federation	38	600	1
Para-Athletics	Domestic Para-Athletics Competitions	Para Athletics Federation of Laos	70	500	8
Para-Soccer	International/Regional Para-Soccer Competition	Lao Para Football Federation	30	1,500	1
	Blind Soccer Competitions	Lao Para Football Federation	20	800	12
	Cerebral Palsy Soccer (CP Soccer)	Lao Para Football Federation	26	600	2
	Soccer activity	Lao Association for the Blind	30	500	1
	Soccer activity	Lao Disabled People's Association	30	700	1
Universal	Flying Disc (National Championships)	MOES	180	1,200	1
	Flying Disc (Vientiane Championships)	MOES	120	1,000	1
Events	Japan Festival	Embassy of Japan, MOES, Ministry of Foreign Affairs	3,500	-	1
	Lao Trade Union Day Celebration	MOES Trade Union	3,000	-	1
	International Women's Day Celebration	MOES Women's Union	3,000	-	1
	Lao People's Revolution Youth Organization Day Celebration	MOES Youth Organization	3,500	-	1
	International Labor Day Celebration	MOES Trade Union	3,000	-	1
	International Children's and National Arbor Day Celebration	MOES	3,000	-	1
	Lao Women's Union Day Celebration	MOES Women's Union	2,000	-	1
	International Day of Yoga	Embassy of India and MOES	2500	-	1
	Lao Sports Day Celebration	MOES	3,500	-	1

	National Teacher's Day Celebration	MOES	3,000	-	1
	Lao Against Drugs Day Celebration	MOES	3,000	-	1
	Lao PDR National Day Celebration	MOES	2,000	-	1
Training	Soccer Referee	MOES	30	-	1
	Rugby Referee	MOES	25	-	1
	Soccer Coach	MOES	30	-	1
	Rugby Coach	MOES	25	-	1
Practice	Athletics	Athlete	33	-	61
	Soccer	Athlete	75	-	6
	Rugby	Athlete	35	-	6
	Para-Athletics	Athlete	11	-	61
	Para-Soccer	Athlete	30	-	6
Citizen	Friendship Soccer Match	Private company	500	-	1
	Sport Day Events	Private company	250	-	1
	Sport Activities	Private company	250	-	1
	Lao Sports Day Celebration	Private company	250	-	1
	Friendship Activities	Private company	250	-	1
	International Labor Day Celebration	Private company	250	-	1
	Jogging, Soccer etc.	Citizen	125	-	208

Source: MOES

b) Selecting Target Components

As indicated in the Usage Plan above, Chao Anouvong Stadium is planned to be used for track and field, soccer, rugby, para-track and field, para-soccer, and general sports. Facilities necessary for competitions and games of these sports will be developed. Other planned uses will also be considered for athletes' training, strengthening training, training of referees and coaches, national ceremonies, cultural events such as International Day and the Japan Festival, privately sponsored sports and cultural events, and citizens' exercise.

c) Setting the Scale

Athletic Track and Field/Soccer Field/ Rugby Field

Considering that the Chao Anouvong Stadium, as a national stadium, will be used for sports competitions and games at the highest level in Laos, and to improve Lao sports to the world level, it will be used for training and practice of elite athletes who will compete in world championships and Olympic Games and for referee and coach training, etc., the athletics field will conform to Construction Category IV, as indicated in the World Athletics (WA), Track and Field Facilities Manual 2019 EDITION. The soccer field size will adhere to the International Federation of Association Football (FIFA) guidelines, and the rugby field size will follow World Rugby (WR) laws. In addition, the infield of the athletics stadium will be used for both soccer and rugby. The acquisition of World Athletics certification for the athletic track and field is not included in the scope of this project because of the extremely high construction precision required, and the high maintenance costs associated with renewing the pavement to maintain the certification, etc. Therefore, the record will not be official. However, domestic competitions for athletics and para-athletics can be held.

As for soccer and rugby, the number of spectator seats and ancillary facilities are relatively small as

described below. So it is expected to be used for small-scale international matches such as qualifiers for international tournaments organized by the ASEAN Football Federation and domestic competitions depending on the judgement of the organizer.

Spectator Stand

The site of the Chao Anouvong Stadium is small and space for constructing side stands cannot be secured to meet the setback regulation. Therefore, only the main stand and the back stand can be constructed, which will number around 2,500. For track and field events, about 300 seats can be installed temporarily around the track, and for soccer games, about 2,500 seats can be installed in temporary stands on the semicircle area of track.

The WA, FIFA and WR competition venue requirements for ancillary rooms and facilities focus on large-scale international competitions such as the Olympic Games, World Athletics Championships, and the World Cup, and cannot be met by the scale of Chao Anouvong stadium. Therefore, the ancillary rooms and facilities will be planned to the extent necessary for the competitions planned to use the stadium. In particular, many operation and administration offices, media and press-related facilities, and facilities and equipment necessary for television broadcasting intended for large-scale international competitions are excluded from the scope of the Project. Therefore, competitions that can be held at Chao Anouvong Stadium will be limited, but it is expected to be used for qualifier and other international competitions organized by the ASEAN Football Federation.

d) Universal Design

In order to plan the stadium as a barrier-free sports facility, it will comply with the “Accessibility Guide, October 2020 Edition” of the International Paralympic Committee (IPC) as much as possible regarding wheelchair seating, corridor widths, doors, handrails, lavatories, changing rooms, reception counters, and ramps at building entrances and exits, etc. However, automatic doors, flashing lights to notify the hearing impaired of emergencies, emergency call systems, auditory assistive systems for spectators, voice guidance devices for the visually impaired, etc., will not be installed due to the difficulty of maintaining them. Therefore in the operation of the stadium, the Lao side is required to establish a system for guiding and assisting the hearing and visually impaired, wheelchair users, and others in use of the stadium or an emergency situation.

4) Policy on Equipment

a) Selection of Equipment

The equipment is selected based on minimal needs for training in the stadium, as well as operation and maintenance. The first priority is the rehabilitation and fitness equipment that is expected to be used mainly by persons with disabilities. The second priority is the equipment used by athletes for track and field, field maintenance equipment and first aid items for injuries sustained during training.

b) Quantity of Equipment

The quantity of all equipment is set in accordance with room capacities and track and field specifications. The quantity of equipment used for athletics training is determined based on the number of users and frequency of use.

c) Universal Design of Equipment

In particular, since the fitness equipment is expected to be used by persons with disabilities, it is planned considering safety and operability rather than the specifications for general fitness gyms.

(2) Policy on Natural and Environmental Conditions

1) Temperature and Humidity

The average temperature in Vientiane is 22-29°C throughout the year, and there are days when the maximum temperature rises to about 40°C in April, which is the hottest season. The average relative humidity ranges from 66% to 84% and the climate is hot and humid. Natural ventilation should be ensured as much as possible in the building, and mechanical ventilation should be planned for rooms with inadequate ventilation. Air-conditioning will be installed in frequently occupied rooms. Storage areas should be adequately ventilated to prevent mold growth.

2) Precipitation

Rainfall in Vientiane is concentrated during the rainy season (May-September), with an average monthly rainfall of 245.8-334.6mm during this period. Roofs should be planned for sufficient drainage for the amount of rainfall in Vientiane. In addition, to avoid flooding of the building, the height of the first floor is planned to be 50cm higher than the ground level. In the construction process, foundation work and athletic track and field paving work should be carried out during the dry season as much as possible.

3) Wind

The average annual wind speed in Vientiane is 7.1-9.8 km/h, which is relatively low, but the structure, roof, sash, etc. should be planned in consideration of natural disaster risks.

4) Flood Countermeasures

Although no serious flood damage has occurred in recent years, the Project site is located in central Vientiane, where flood damage due to overflowing of the Mekong River has occurred in the past. The height of the first floor should be planned to be 50 cm higher than the ground level.

5) Earthquake Countermeasures

Since earthquakes have occurred frequently in Laos in recent years, seismic forces will be taken into account in structural planning to ensure building safety.

(3) Policy on Social and Economic Conditions

1) Social Conditions

The Government of Lao PDR and the Ministry of Education and Sports are committed to promoting the values of inclusiveness and diversity in the Ninth National Socio-Economic Development Plan and

the Five-Year Plan for the Education and Sports Sector. The following gender equality and universal design considerations will be addressed in the planning of facilities covered by this Project.

- The athletes' changing rooms, lavatories, and showers shall be designed to allow separate access for men and women. These areas should also be barrier-free for para-athletes.
- Spectator spaces for wheelchair users should be planned so that wheelchair users can observe the games with their caregivers. Their eye level should be considered.
- The stadium should be designed for ease of movement for people with disabilities.
- Signage should be designed to be easy to understand for the visually impaired and low-vision users.
- Barrier-free restrooms should be planned in consideration of use regardless of gender of caregivers of people with disabilities.
- A parking lot for wheelchair users should be planned within the site.

2) Economic Conditions

Prices in Laos have been rising in recent years, albeit with year-on-year variations. The consumer price inflation rate from 2011 to 2021 ranged between 0.8% and 7.5%, but in the last three years, it has been on an upward trend of 2.04% (2018), 3.32% (2019), and 5.10% (2020). Therefore, in estimating the project cost, the year-on-year rate of change in the consumer price index of the IMF statistics is used to project price changes from the month following the time of estimation to the time of the assumed bidding, for each of the unit price of materials and labor for local portions and construction equipment rent.

(4) Policy on Construction and Procurement

1) Facility Plan

Large-scale construction work is being carried out in the capital city of Vientiane, and there will be no problem in procuring skilled workers if local general construction methods are used. The general local construction method will be used as much as possible in the facility plan of this project. However, the roof above the spectator seating area requires a cantilever steel structure beam, but in Laos, steel construction work will need to be outsourced from neighboring countries. Therefore, steel frame construction is planned to be kept to the minimum necessary. In addition, since there are stadiums in Laos and neighboring countries that meet the requirements set out in the World Athletics track and field facilities manual, the track and field facilities are planned in accordance with the manual, despite the acquisition of World Athletics certification for the athletic track and field not being included in the scope of this project. Construction materials native to Laos are limited to cement, aggregate, rebar, timber, bricks, and concrete blocks. Other materials will be imported from Thailand and Vietnam. Materials commonly available in Laos will be used whenever possible in the project.

2) Equipment Plan

It is generally expected that the equipment for this project will be procured from Japanese or European manufacturers. In recent years, many manufacturers dealing in sporting goods sell other companies' products instead of their own (including OEMs), and it is difficult to ensure competitiveness in bidding if it is limited to Japanese manufacturers. It is also assumed that lawn mowers will be procured locally

or from a third country (Thailand) due to the ease of maintenance, but it will be difficult to procure products that meet the specifications required for this project if limited to Japanese manufacturers. Therefore, European and U.S. products shall also be included in the plan. There is at least one distributor in Vientiane that can provide maintenance services for fitness equipment and other sports equipment. In addition, for lawn mowers, a service center in Thailand will provide after-sales service for Laos.

(5) Policy on the Utilization of Local Contractors

1) Facility Plan

In Vientiane, there are many local construction companies in operation. Construction companies in Laos are classified as Category 1 if their capital exceeds 5 billion kip, and Category 2 if it is less than 5 billion kip. Most are Category 1. Some of the local companies have experience working in grant aid projects with Japanese construction companies. In this project, the facility will be designed to be compatible with the technical level of Laotian construction companies by basically adopting local construction methods, and an organizational structure is envisioned in which the local companies work under the supervision of a Japanese construction company. Although World Athletics certification for the track and field facilities will not be applied for in this project, the plan complies with the World Athletics track and field facilities manual, and specialized contractors must be used for the track and field construction. For elevators, a Japanese manufacturer has established a local subsidiary in Vientiane that can be utilized for new construction and maintenance.

2) Equipment Plan

Local agents will be utilized for equipment maintenance after the handover.

(6) Policy on Operation and Maintenance Capacity of the Executive Agency

1) Facility Plan

In planning, facilities should be technically operable and maintainable under the operation and maintenance system of Laos. In addition, facilities with low maintenance costs should be selected. The plan should also aim to reduce running costs.

2) Equipment Plan

In planning the equipment, the following points were given sufficient consideration to ensure that it can be operated and maintained adequately by the executive agency.

- Select equipment that is inexpensive to operate.
- Select equipment with specifications consistent with the intended use of the facilities and the users' abilities.
- Develop an appropriate procurement plan to prevent accidents and improve the recipient's ability to operate and maintain the equipment, e.g., allowing sufficient time for operational explanations during installation.
- Select equipment so that appropriate local agents in Laos or neighboring countries can provide after-sales services.

(7) Policy on Setting the Grade for Facilities and Equipment

1) Athletic Track and Field

Athletic track and field facilities will be planned to conform to the Competition Category 7/Construction Category IV as specified in the World Athletics Track and Field Facilities Manual 2019 EDITION. The acquisition of World Athletics certification for the athletic track and field is not included in the scope of this project because of the extremely high construction precision required, and the high maintenance costs associated with renewing the pavement to maintain the certification.

The track pavement shall be IAAF (WA) certified and durable urethane all-weather pavement, as it will be used for the training of elite athletes.

In addition, since the surface layer of the urethane all-weather pavement is impermeable to moisture, swelling of the surface layer may occur if the base layer is concrete. Therefore, permeable asphalt pavement should be used as the base layer.

2) Soccer Field and Rugby Field

The field dimension and turf etc. shall be planned in accordance with FIFA guidelines and World Rugby laws as it will be used for national competitions, Lao league second division matches and AFF Championship qualifying rounds for soccer, and national competitions and small-scale international competitions for rugby. However, ancillary facilities and the number of spectator seats cannot meet these rules, hence competitions that can be held at the stadium will be limited. For international competitions, consultation with and approval from the organizer is required.

3) Turf

The World Athletics, FIFA, and World Rugby regulations for fields allow natural turf, while artificial turf is allowed only if it meets the standards of these associations. Approved artificial turfs by these associations are not distributed in Laos and necessitate to be imported from Japan, Europe, the USA, China, etc., and requires installation and maintenance by a special contractor.

On the other hand, natural turf is commonly used, and its construction and maintenance costs are lower than those of artificial turf in Laos. Also, turf producers and distributors can readily supply the necessary amount of turf for the stadium. Since natural turf is used in the existing facilities and in the new National Stadium without problems, the inner field, which will be used for both soccer and rugby, will also use natural turf.

4) Field Drainage System

Field drainage facilities shall be planned due to the large amount of rainfall during the rainy season in Laos.

5) Spectator Stand

Spectator seating shall utilize durable high-density polyethylene, with low-back seats for general seating and high-back seats for VIP and VVIP seating.

6) Ancillary Facilities

The building shall be planned using materials and construction methods common in the local area. For

the VVIP room and VIP room, the finishing materials should be of higher quality, but the construction and maintenance costs shall be as reasonable as possible.

Finishing materials will be used that are unlikely to cause problems in waterproofing, heat-insulation, durability, and mold-resistance, and are easy to maintain and manage on-site.

7) Equipment Plan

Sports rehabilitation and fitness equipment shall be designed with special attention to safety for use by persons with disabilities, and track and field competition equipment shall be designed to practice specifications. The stadium operation and maintenance equipment specifications should not be overly complicated, and the plan should include products that are commonly available on the market.

(8) Policy on Construction/Procurement Methods and Construction Period

1) Facility Plan

The specifications for the buildings shall be planned with reference to the Japanese Architectural Standard Specification (JASS) of the Architectural Institute of Japan, and with full consideration of the construction conditions in Laos, as well as the scale, durability, safety, workability, and future maintenance of the building. In general, most construction materials, including structural, finishing, and facilities and equipment, can be procured in Laos. However, as most of these materials are imported from neighboring countries, inventory shortages are possible. Therefore, it is necessary to plan materials procurement well in advance in accordance with the construction process. The construction schedule shall be planned to avoid the rainy season as much as possible for work on the ground, foundations, structural frame, and concrete base for the athletics field, and appropriate construction periods shall be formulated in consideration of local labor procurement conditions and construction capacity.

2) Equipment Plan

All equipment shall be transported to the site by the Japan side, and the scope for transportation shall be from Japan or third countries to the project site in Vientiane. After initial packing for shipment by the manufacturer or manufacturer's agent, the equipment shall be readied for transportation at the packing house using an appropriate method for protection and theft prevention.

In addition, this is a complex project involving facilities and equipment, and the schedule for procurement and installation of equipment must be planned in accordance with the construction schedule and actual progress. Therefore, the person in charge of equipment procurement should set an appropriate procurement schedule in consideration of the fabrication and transportation periods, etc., while maintaining coordination with those involved in the construction of the facility.

(9) Policy on Local Architectural Regulations

The project site is located in a conservation area, and the regulations listed below are to be complied with in the facility planning.

- The maximum height of the building must be less than 20 meters. However, floodlights are not subject to this provision.

- The building coverage ratio must be 75% or less. If multiple buildings exist on the same site, the total area of the buildings is subject to this rule. Unroofed competition areas are excluded from the area subject to the building coverage ratio.
- The floor area ratio must be 200% or less. If multiple buildings exist on the same site, the total area is subject to the floor area ratio.
- There is a setback provision from the road boundary. In the case of a designated road, buildings are to be set back an additional 4 meters from the center line of the road to the side of the site, based on the line of 1/2 the width of the designated road, and 4 meters from the road boundary for non-designated roads. Setback provisions are for concrete columns and other fixtures that cannot be easily removed.
- There are setback regulations from the adjacent property boundary. Fixtures that cannot be easily removed, such as concrete columns, must be set back 2 meters from the adjacent property boundary. When there is more than one building on a site, there must be a 3-meter separation between them.

(10) Policy on Gender Mainstreaming

- Facility design and selection of equipment that reflects gender-specific needs from a user's perspective including those related to safety and usability.
- Necessary measures to address gender-related issues such as ensuring equal pay between genders and adequate working environment for women workers, among others will be considered at the construction phase.
- Collection of gender aggregated data for monitoring and evaluation (both for quantitative and qualitative indicators) to the possible extent (obligations of the Lao PDR side)
-

2-2-2 Basic Plan (Construction Plan/Equipment Plan)

(1) Site/Facility Layout

- The track is located in the center of the site.
- The orientation of the track is placed at an angle of 22.5 degrees from the north-south axis to the east-west axis in accordance with World Athletics regulations.
- The long jump and triple jump facilities are located in the outfield on the side of the main stands.
- The stands are located along the straight lanes of the running track, with the main stand on the west side and the back stand on the east side.
- An LED large screen display and flagpole are located on the long axis of the field for visibility from spectator seats, The LED large screen display is located on the north side, and flagpole are located on the south side of the field.

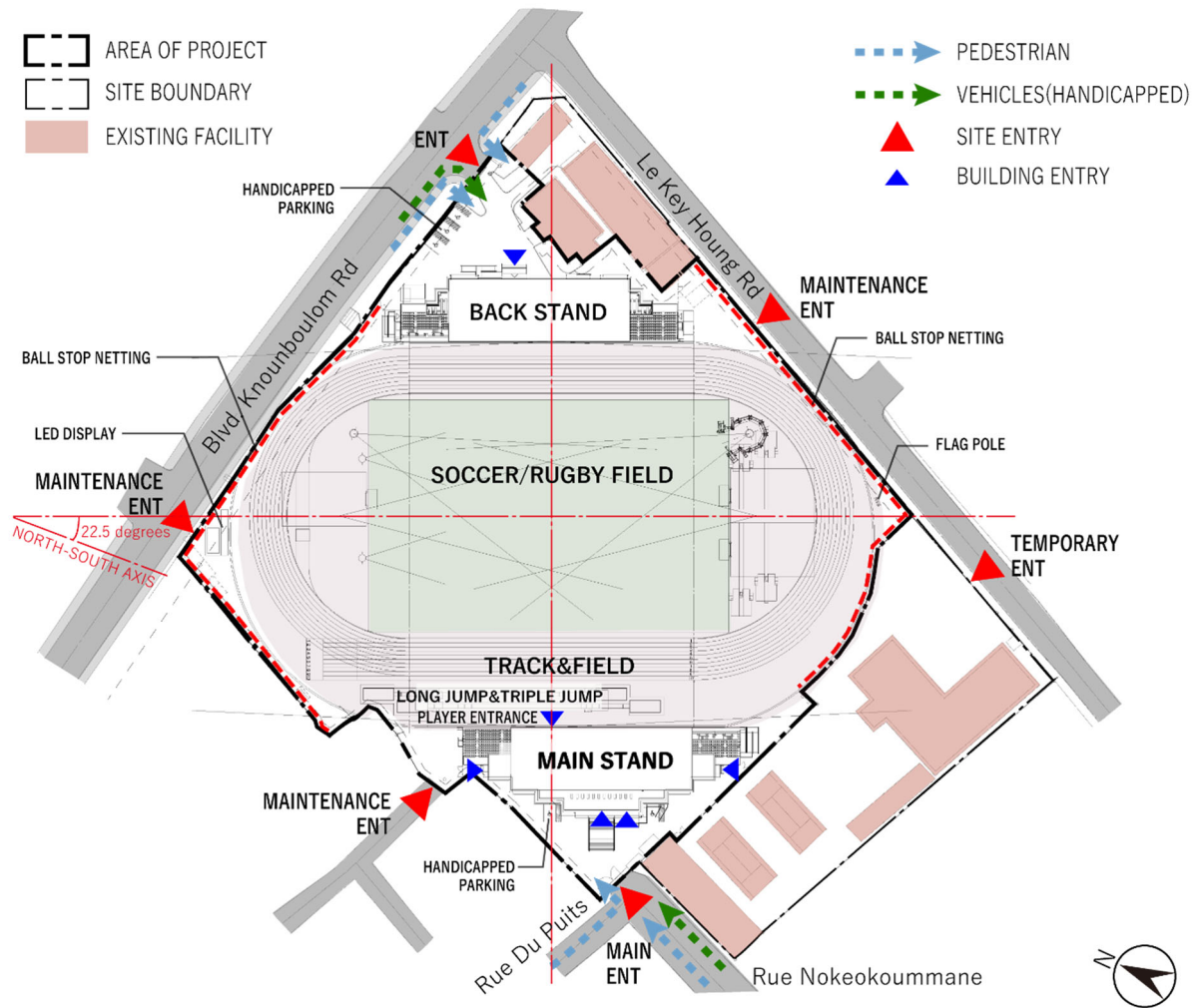


Figure 2-2 Site Plan

(2) Access

- The stadium for this project is located in the center of the city and is easily accessible by public transportation. There is a public bus stop next to the stadium gate on Boulevard Knounboulom road on the back stand side and another public bus stop on Rue Setthathilath street, about 3 minutes walk along Rue Nokeokoummane street on the main stand side. Due to the small size of the site, parking lots will be provided only for people with disabilities in the stadium. For parking for competition officials, spectators, etc., the parking lots of nearby facilities such as Ministry of Education and Sports office, Lao-Japan Budo Center etc. adjacent to the stadium will be used as needed.
- The main gate on the southwest side of the site, connected by Rue Nokeokoummane, which accesses the main stand, is basically planned for spectator access on foot only, and for vehicles, only for people with disabilities or pick up and drop off players. Two parking spaces for people with disabilities will be planned.
- The gate on the northeast side of the site facing Boulevard Khounboulom Road, which accesses the back stand, is basically planned for spectator access on foot only, Vehicles will be used only for transportation of athletes or handicapped persons, and two parking spaces will be planned for handicapped persons.
- The gate and parking spaces (for 40 to 50 cars) of the Ministry of Education and Sports office on the

southeast side of the site, facing Le Key Houng Road, can be used for competitions and events, and will provide access for minibuses for athletes, emergency vehicles, equipment delivery, media, and tournament organizers' vehicles.

(3) Athletic Track and Field Plan

- Nine lanes for the 400m track.
- Ten lanes for the straight 100m and 110m in consideration of para-athletics accompanist.
- All-weather urethane pavement shall be used for the track, the semi-circular area of the infield, and outfield.
- A water moat for the steeplechase shall be provided in the semi-circular area of the 2nd curve.
- Two lanes shall be provided in the outfield on the main stand side for the long jump and triple jump runway, with sand pits on both ends.
- The pole vault runway shall be provided two lanes in the semi-circular area of the 1st curve, and one lane between long jump and triple jump runway on the main stand side, and a box shall be installed at each end.
- Two high jumps shall be provided in the semi-circular area of the 1st curve and one high jump in the semi-circular area of the 2nd curve.
- For the shot put, two circles for throwing on the lawn shall be provided in the semi-circular area of the 2nd curve.
- Hammer throw and discus throw circles and a throwing cage shall be of a dual-use type, and shall be provided in each of the semi-circular area of the 1st curve and the 2nd curve.
- Javelin throw runways shall be provided in each of the semi-circular area of the 1st curve and the 2nd curve.
- The turf area shall be provided with underground drainage channels, and rainwater drainage channels shall be provided on the inner perimeter of the track and on the outer perimeter of the outfield.
- A sprinkler system shall be provided for watering the turf.

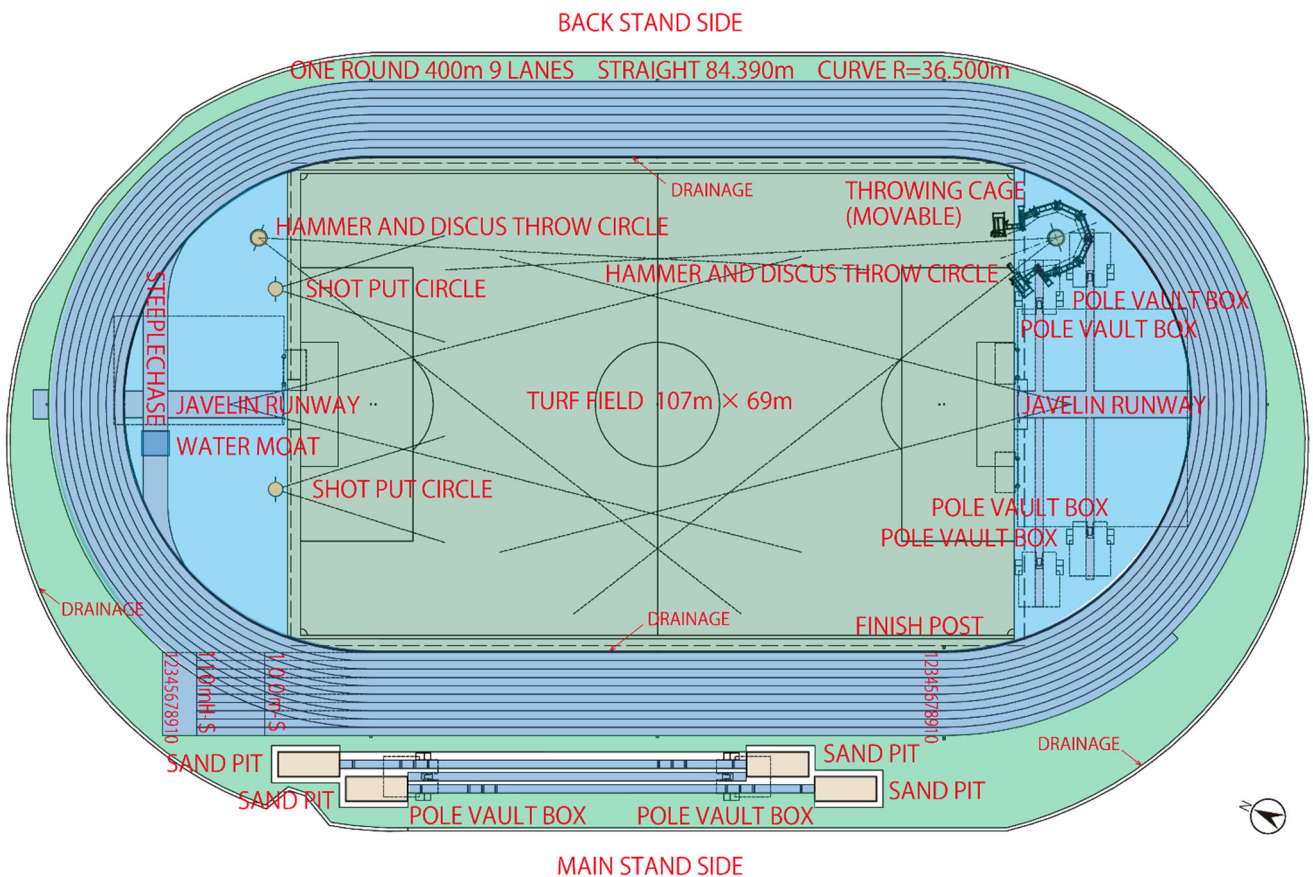


Figure 2-3 Athletics Track and Field Plan

(4) Architectural Plan

Facilities shall be planned with reference to the below.

- World Athletics Track and Field Facilities Manual 2019 EDITION
- World Para Athletics Rules and Regulations 2020-2021
- FIFA Football Stadiums Technical Recommendations and Requirements 5th Edition 2011
- IBSA Blind Football Rulebook 2022-2025
- World Rugby Laws of the Game 2022
- IPC Accessibility Guide 4th Edition October 2020

1) Spectator Seating

- Approximately 2,500 spectator seats are planned.
- The width of the step floor shall be 850 mm considering the aisle width of 410mm in front of the seats, and the height of the step floor shall be 400 mm considering safety and sight lines when moving down the vertical aisle.
- The number of seats between the vertical aisles is 14 in consideration of safety during evacuation, and the distance between seats is about 450 mm.
- The width of the vertical aisle is 900 mm in consideration of safety during evacuation.
- The walking distance from the seats to the aisle with a width of 1 m or more is 15 m or less, and the walking distance from the seats to the evacuation door is 40 m or less.

2) Wheelchair Accessible Seating

- Wheelchair seating shall be provided for at least 1.2% of the total number of seats in accordance with the IPC Accessibility Guide.
- Wheelchair seating shall be 800 mm x 2,300 mm in size and shall have an adjoining seat for a companion to meet the IPC Accessibility Guide.
- Provide wheelchair seating at a height close to ground level in the spectator area to allow wheelchair users to evacuate quickly in the event of a disaster.

3) VVIP/ VIP Seating

- The distance between VIP seats is approximately 500 mm, and approximately 50 seats will be provided.
- Wheelchair seating are also provided in the VIP area.
- VVIP seats have a seating distance of approximately 1,000 mm, and seven seats will be provided.
- Lounges are provided for VVIPs and VIPs respectively.
- VVIP and VIP seating areas will have their own barrier-free toilets from the viewpoint of universal design.

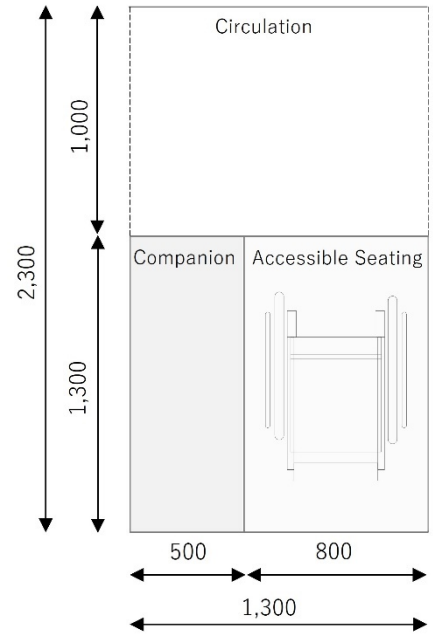


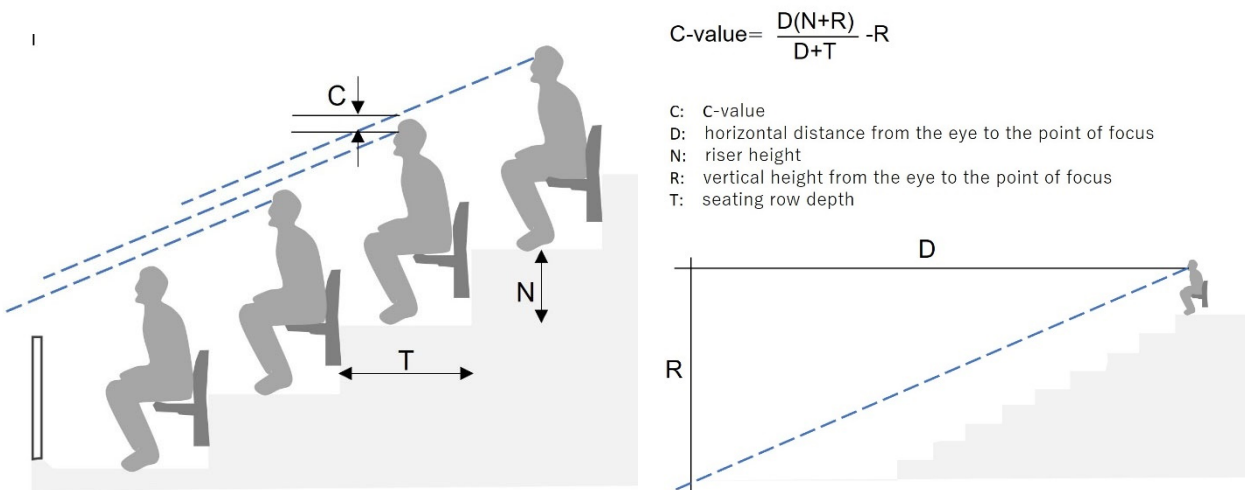
Figure 2-4 Wheelchair seating

4) Focal Point

- The focal point of the main stand is the runway for the long jump and triple jump.
- The focal point of the back stand is the outermost lane of the running track.

5) Sight Line

- C-value is 60 or higher whenever possible.



$$C\text{-value} = \frac{D(N+R)}{D+T} - R$$

- C: C-value
- D: horizontal distance from the eye to the point of focus
- N: riser height
- R: vertical height from the eye to the point of focus
- T: seating row depth

Figure 2-5 Sight Line

6) Media Seating

- Due to limited space, there will be no dedicated media seats. Multipurpose rooms on the third floor of the back stand and/or part of the spectator seats will be used.

7) Multipurpose Room

- Multipurpose rooms with spectator seats will be provided on the third floor of the back stand, which can be used for competition management rooms, waiting rooms, media rooms, box seats, premium seats, spectator seating for those with special care needs, etc. during competitions or games, and can be used for events and meeting rooms etc. when there are no tournaments or games.

8) Concourse

- The area of the concourse is based on 0.35 m²/seat.
- The width of the concourse shall be based on the traffic volume shown below in accordance with the IPC Accessibility Guide, but if it is difficult to secure parts of the concourse, an effective dimension of 1,300 mm shall be secured for safety in case of evacuation.

Table 2-4 Corridor Width Criteria (IPCAG)

Traffic	Minimum Corridor Width
Low	1,500 mm
Middle	1,800 mm
High	2,000 mm

Source: IPC

9) Corridors

- Corridors in the building must be wide enough to accommodate traffic according to the IPC Accessibility Guide.

10) Stairways and Evacuation Routes

- Stairway dimensions shall meet the IPC Accessibility Guide criteria.
- The width of the evacuation stairway shall be a minimum 1,200 mm effective dimension for safety during evacuation.

Table 2-5 Stairway Width Criteria (IPCAG)

Part	Minimum Dimension	Maximum Dimension
Riser	125 mm	180 mm
Tread	280 mm	350 mm
Nosing	-	38 mm

Source: IPC

11) Changing Rooms for Players

- One wheelchair-accessible toilet and one wheelchair-accessible shower stall are provided in the players' changing rooms.
- A bench and handrail are provided in the wheelchair-accessible shower booth and changing area.

- In addition to benches, one bed for changing people with disabilities is provided in the changing rooms.

12) Toilets

- Toilets are planned to follow FIFA Football Stadiums Technical Recommendations and Requirements 5th Edition 2011 and IPC Accessibility Guide 4th Edition October 2020.

Table 2-6 No. of Toilets Criteria (FIFA)

User	Toilet	Standard No.	Standard
Male	Urinal	15/1,000 persons	FIFA
	Toilet	3/1,000 persons	
	Sink	6/1,000 persons	
Female	Toilet	28/1,000 persons	FIFA
	Sink	14/1,000 persons	
Universal (Wheelchair)	Toilet	1/15 Seats	IPC

Source: FIFA Football Stadiums Technical Recommendations and Requirements 5th Edition 2011

- The number of toilets planned is shown in the table below. The numbers in parentheses indicate the number of toilets according to the above criteria, assuming an audience of 50% male and 50% female.

Table 2-7 No. of Toilets in New Stadium

Location	Total Seat No.	Wheelchair Seat No.	Male				Female			Universal
			Spectators (50%)	Urinals	Toilets	Sinks	Spectators (50%)	Toilets	Sinks	
Main Stand 1F	-	20	-	- (-)	- (-)	- (-)	-	- (-)	- (-)	1 (2)
Main Stand 2F	1183	-	592	10 (9)	4 (2)	4 (4)	591	16 (17)	7 (9)	1 (0)
Main Stand 3F (VIP)	50	2	25	- (1)	- (1)	- (1)	25	- (1)	- (1)	2 (1)
(VVIP)	7	0	4	- (1)	- (1)	- (1)	3	- (1)	- (1)	1 (0)
Back Stand 1F, 2F	1231	20	616	11 (10)	5 (2)	4 (4)	615	10 (18)	4 (9)	2 (2)
3F	72	0	36	2 (1)	1 (1)	1 (1)	36	2 (2)	2 (1)	1 (0)

Source: Study team

13) Parking

- Only wheelchair accessible parking spaces are planned due to limited space on the site. Two parking spots on the main stand side and three on the back stand side are planned.
- During competitions and events, 40 parking spaces will be available at the Ministry of Education and Sports office on the stadium site.

14) Universal design

- Ramps with a gradient of 1/20 are provided at the main entrances and exits of the building.
- The main doors will be a minimum 850 mm wide, with space in front of the doors so wheelchair users can open and close them with no difficulty.
- Door handles are designed to be easily opened and closed by people with disabilities, such as lever handles, panic handles, and pulls.
- The height of the reception counter for wheelchair users is 850 mm from the floor, with a knee space 750 mm high, 750 mm wide, and 500 mm deep.
- Guiding blocks are to be provided from the main entrance of the building to the reception desk and elevators. Warning blocks will be provided at landings before stairs and ramps.
- Braille signs are to be installed on the handrails of stairs and ramps.

15) Gender

- Two changing rooms, referee's rooms, and ball person's rooms are planned to enable to use by two teams or each gender, depending on the tournament.

16) Evacuation

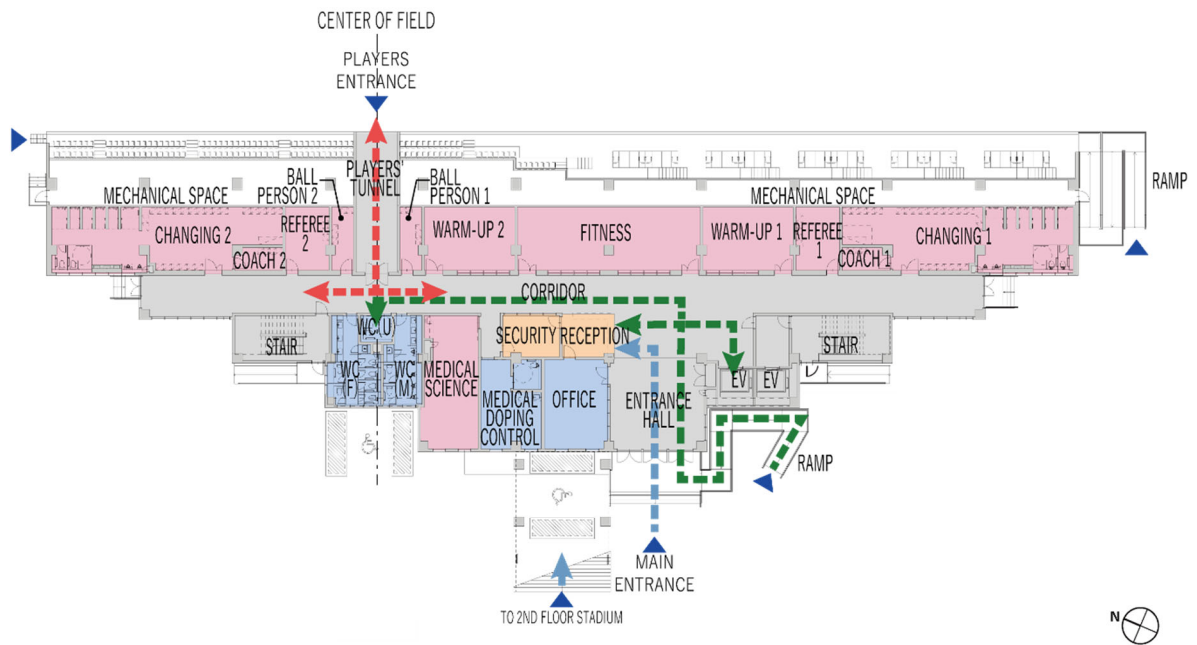
- Provide fire service access elevator lobbies in front of elevators and provide backup powers to the elevators for evacuation of wheelchair users and people with walking difficulties from the second floor and the third floor. In addition, provide balconies on the outside of staircases as a temporary evacuation space for waiting until help arrives.

(5) Floor plans

1) Main stand

1st Floor

- The 1st floor is the player and facility management zone.
- The Fitness Room and the Medical Science Room are located on the first floor for easy access by persons with disabilities and near the Facility Management Office for easy reception and management of users.
- The Doping Control Room and the Medical Office are shared and located on the first floor for easy access to first aid and emergency medical services.
- The players' tunnel for athletes to access the playing field is aligned with the center line of the field.

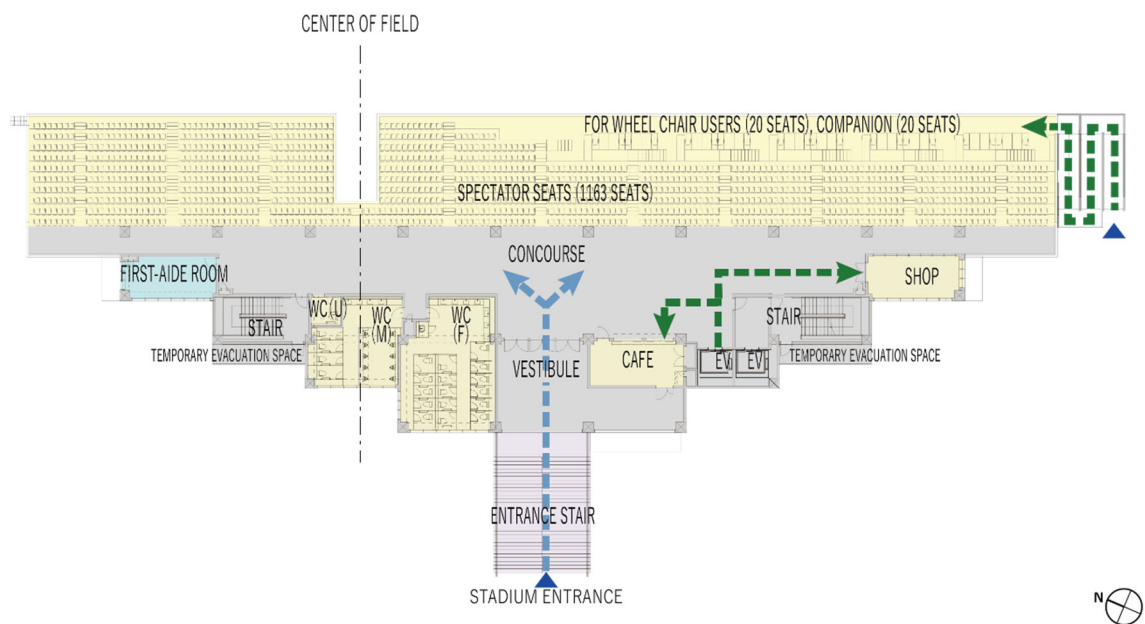


LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

2nd Floor

- The 2nd floor is the spectator seating zone.
- Wheelchair user seats will be placed in the front row near the ground in consideration of evacuation in the event of a disaster.
- First aid room will be planned for spectators' illness, injury, and breastfeeding.
- The Store and the Cafe are located on the concourse for easy access by spectators.

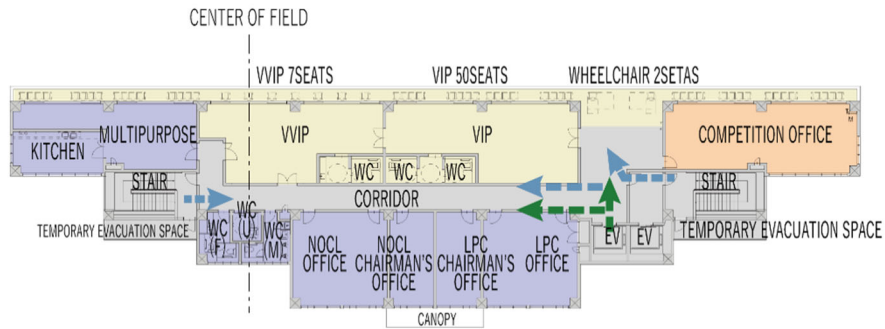


LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

3rd Floor

- The 3rd floor is the VIP and VVIP zone, with spectator seats on the balcony of the VIP and VVIP rooms.
- Locate a competition office on the field side where the competitions can be monitored.
- Provide office space for the National Olympic Committee and National Paralympic Committee of Laos.
- Plan a kitchen to be able to serve drinks and snacks to VVIPs and VIPs, and to provide food and beverage service when the VIP room is used as premium seating or rented out as an event venue.
- Provide a multi-purpose room for a preparation of competition staff, cafeteria, a meeting space, etc.

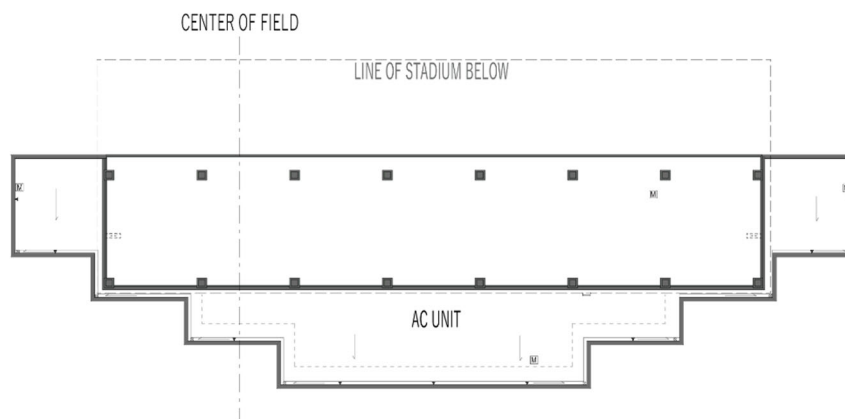


LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

Roof Floor

- The rooftop is utilized for air-conditioning equipment.



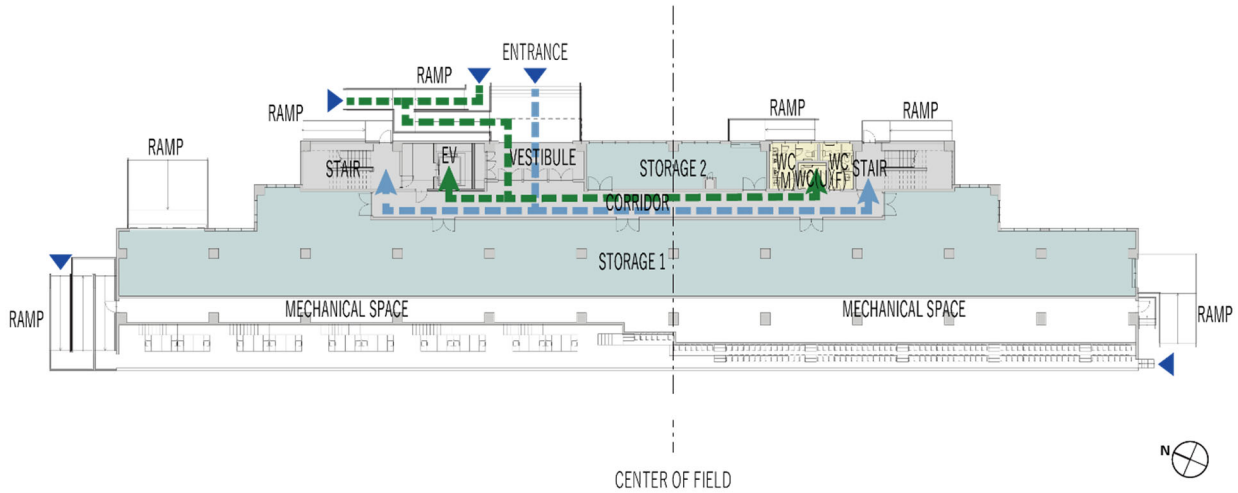
LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

2) Back stand

1st Floor

- The 1st floor is used for equipment storage.

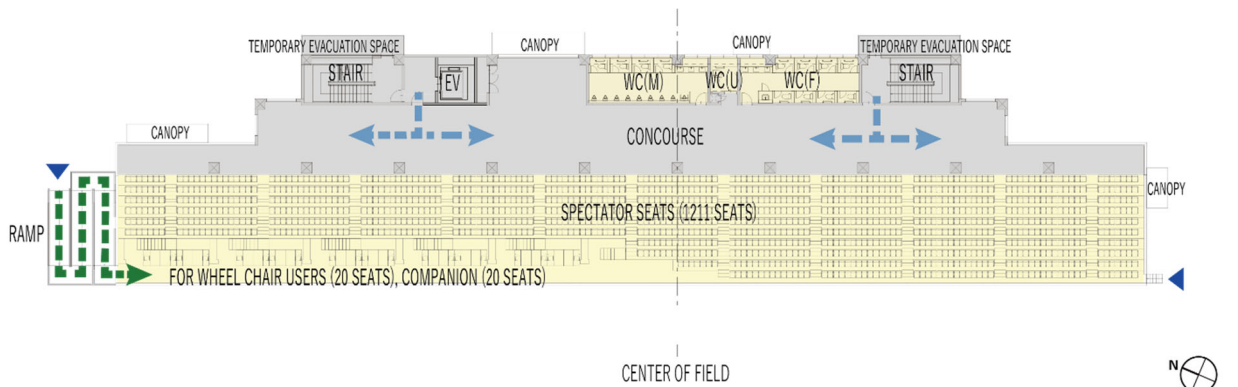


LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

2nd Floor

- 2nd floor is the spectator seating zone.
- Wheelchair user seats will be placed in the front row near the ground in consideration of evacuation in the event of a disaster.

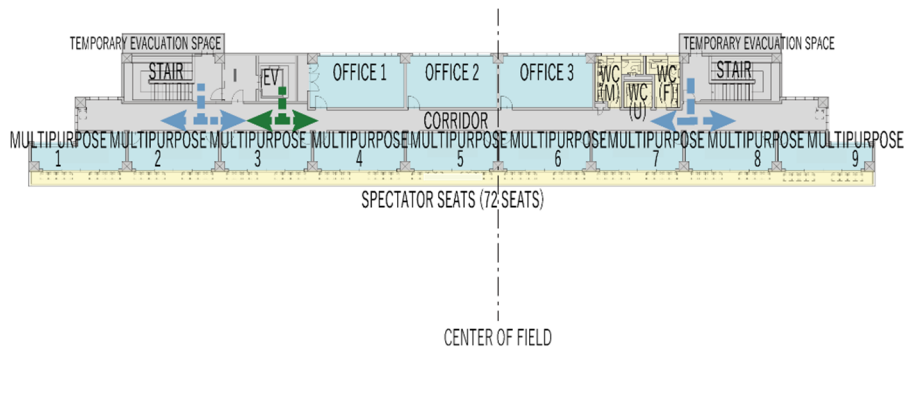


LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

3rd Floor

- The office of the Sports Coordination Division, Elite Sports Department and Lao National Anti-Doping Organization, International Cooperation Department of the Ministry of Education and Sports, which will be demolished and removed for the construction of the new stadium will be located on the 3rd floor.
- On the field side, multipurpose rooms will be located which can be used for competition management rooms, waiting rooms, media rooms, box seats, premium seats, spectator seats for those with special care needs, etc. during competitions or games, and can be used for events and meeting rooms etc. when there are no tournaments or games.
- Spectator seats will be provided in the balcony of multipurpose rooms which overlook the field.

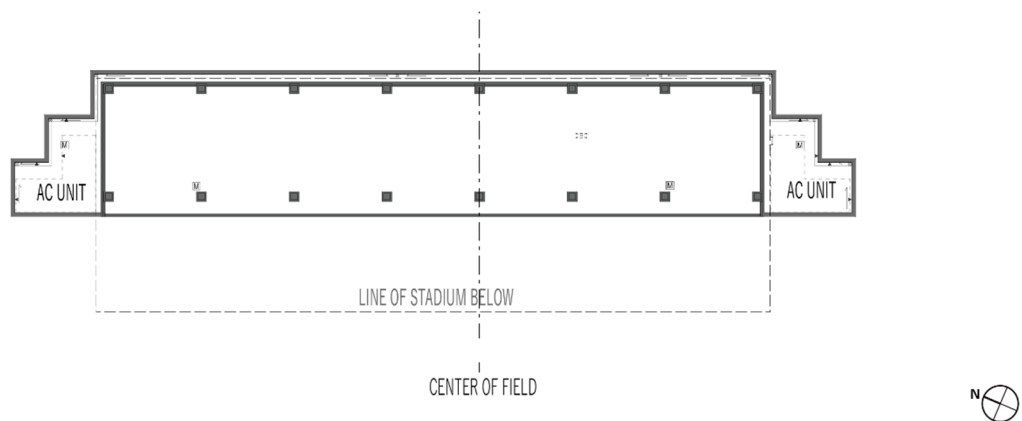


LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

Roof Floor

- The rooftop is utilized for air-conditioning equipment.



LEGEND

MANAGEMENT	OPERATION	COMMON	PEDESTRIAN	PLAYERS	ENTRANCE/EXIT
TEAM RELATED	SPECTATOR	DORMITORY	WHEEL CHAIR USERS		

(6) Elevation Plan

- The exterior of the building shall harmonize with the landscape of Laos.
- A banner space is planned for announcements of competitions and events.

(7) Cross Section Plan

- In order to secure sufficient air volume, the ceiling height is about 2.8 m. The floor height is 4 m, taking into account space for equipment piping and wiring in the ceiling and the height of the stands.
- The level of the 1st floor is 50 cm above ground level, considering rainfall during the rainy season.
- The height of the lowest level of spectator stands is 90 cm higher than the level of the field.

(8) Interior and Exterior Finish

1) Exterior Finish

- The semi-outdoor floors of the stands and concourses, which will be exposed to rain, will be waterproofed with ultra-fast curing urethane (heavy use, anti-slip).
- Exterior walls are painted.
- The flat rooftop is waterproofed with asphalt and has external insulation and protective concrete in consideration of the strong sunlight and the outdoor air-conditioning units.

2) Interior Finish

a) Floor

- The floor of players' area on the 1st floor of the main stand uses rubber tiles in consideration of spiked shoes.
- The warm-up room floors are finished with long-pile artificial turf.
- The floors of conference rooms, offices, multipurpose room, cafes, shops, indoor corridors, etc., other than the players' area, will have tiles common in the local area.
- The floors of VIP and VVIP rooms are finished with carpet tiles.
- The floors of toilets and shower rooms are waterproofed with asphalt and finished with tiles.
- The stair floors are finished with vinyl sheet.
- The equipment storage floors on the 1st floor of the back stand are finished with a thick epoxy resin coat.

b) Wall

- The interior walls are basically finished with paint, and the walls of shower rooms are finished with tiles.

c) Ceiling

- The ceilings of rooms and indoor corridors are aluminum system ceilings with rock wool decorative sound-absorbing boards, and the ceilings of toilets, shower rooms, and kitchens are lightweight steel ceiling flame with fiber-reinforced cement boards with painted finishes. The ceilings of concourses, equipment storages, and stairs are exposed ceilings.

(9) Landscape Plan

- The exterior pavement is concrete.
- Rainwater drainage takes into consideration the rainfall in Vientiane, and gutters and catch basins shall be provided.
- A fence will be installed around the perimeter of the competition area for security purposes.
- Two wheelchair parking spaces are provided on the main stand side and three on the back stand side.
- In order to prevent accidents and damages caused by the ball flying out of the premises, 15-meter high ball stop netting shall be installed from the back of the soccer and rugby goals to both sides of the goals.

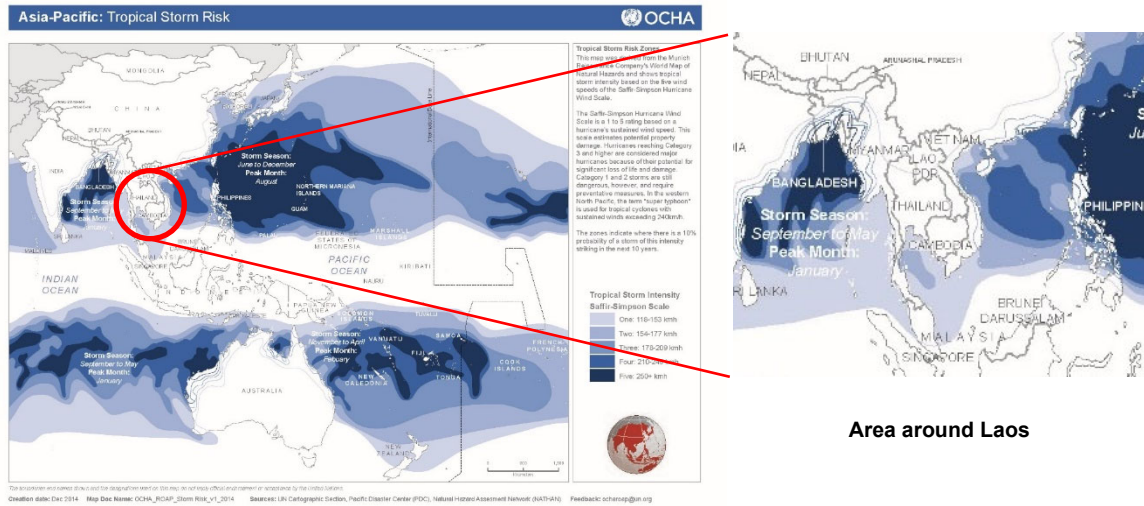
(10) Structure Plan

1) Overview of Structure Plan

- The building design is analyzed according to Japanese standards. However, $C_o = 0.2$ is the recommended value for the standard shear force coefficient for seismic load in Laos. The analysis is set at 25% of the primary design horizontal force ($C_o = 0.05$) of the Japanese Building Standard Law, and the criterion is within the short-term allowable stress.

2) Wind Load

- There is no basic design wind speed in Laos.
- The hazard map for the area around Laos shown in the table below indicates that the project site belongs to Category I (wind speeds of 32.7-42.5 m) or lower. This hazard map is evaluated for a 100-year return period. In addition, the National Risk Profile of Lao PDR November 2010 (National Disaster Management Committee, Government of Lao PDR) classifies Vientiane as an area at risk of tropical storms (1-minute average wind speed 63 - 118 km/hr) over a 50-year return period. Considering that Japan uses 10-minute average wind speed for a 50-year return period as a reference wind speed, the wind speed converted to 10-minute average wind speed (1-minute average wind speed $\times 0.88$) is 15.4 m/s - 28.8 m/s. In this project, the wind speed of 30 m/s (V_o), which is the minimum reference wind speed in Japan is adopted. The ground surface roughness classification is III.



Source: UN OCHA

Figure 2-6 Tropical Storm Risks

3) Superstructure Plan

- In consideration of on-site workability, both the main and back stands shall be constructed of reinforced concrete (RC), partially steel-framed.
- A rigid-frame structure shall be adopted in both the X and Y directions, and the walls shall be concrete blocks.
- The roof over the stands shall be a cantilevered steel-frame structure.

4) Current Ground Conditions

- Standard penetration tests were conducted at five locations on the site.
- Silty clay with N-values of 12 to 25 is located from 3 to 5 m below the surface, the sandy clay with N-values of 5 to 13 is located from 12 to 13 m below the surface, the sandy clay with N-values of 7 to 10 is located from 15 to 16 m below the surface, and the ground with N-values exceeding 50 is located from 16 to 18 m below the surface.

5) Foundation Plans

- In order to reduce the construction period and cost, the plan is to reduce the weight of the building and use a solid foundation. If pile foundations are necessary, precast concrete piles will be used.

6) Materials

a) Concrete

- Concrete design strength of the structural frame shall be $F_c=24\text{N/mm}^2$ ($F_c=30\text{N/mm}^2$) for the mixing strength).

b) Reinforcing Bars

- Lao specification steel bars have a different cross-sectional area shown in the table below compared to JIS standards. Since structural calculations are performed using integrated calculation software, it is necessary to change the steel bar specifications in the software. Since the standard strength F value of the steel material is the same, the F value, which is the material strength of the rebar, is corrected for the difference in the cross-sectional area. In doing so, the F value corrected by the cross-sectional area ratio shown in the table below is used for "tension" and "compression" of the rebar, but the difference in the cross-sectional area ratio is not considered for shear and adhesion because the circumference is almost the same.
- In the input of the integrated calculation, input as JIS standard D rebar, and input for each diameter as DB specification of the material standard.

Table 2-8 Comparison of Lao and Japanese Rebar Standards and Corrected F Values

Laos					Japan (JP)					Φ_{la} / Φ_j	$\alpha = A_{la} / A_j$	JP F Value	Corrected F Value
Diameter	F Value	R (mm)	Φ_{la} (mm)	A_{la} (mm ²)	Diameter	F Value	R (mm)	Φ_j (mm)	A_j (mm ²)				
DB10	SD295	10	31.4	78.54	D10	SD295	9.55	30.0	71.0	1.05	1.11	295	327
DB12	SD295	12	37.7	113.10	D13	SD295	12.74	40.0	127.0	0.94	0.89	295	263
DB16	SD295	16	50.2	201.06	D16	SD295	15.92	50.0	199.0	1.00	1.01	295	298
DB18	SD390	18	56.5	254.34	D19	SD390	19.11	60.0	287.0	0.94	0.89	390	347
DB20	SD390	20	62.8	314.20	D19	SD390	19.11	60.0	287.0	1.05	1.09	390	376
DB22	SD390	22	69.1	379.90	D22	SD390	22.29	70.0	387.0	0.99	0.98	390	382
DB25	SD390	25	78.5	490.87	D25	SD390	25.48	80.0	507.0	0.98	0.97	390	378

Note: Rebar with α less than 1 has lower bearing capacity than the Japanese standard.

- The corrected allowable stresses for rebar specified in the Japanese Building Standard Law by the cross-sectional area ratio (α) between the above-mentioned rebar available in Laos and the JIS standard are shown in the table below. This corrected allowable stress is used in the structural calculations for this project.

Table 2-9 Long-term and Short-term Stresses in Steel Bars in Laos

Unit: N/mm²

Laos	Long term			Short term		
Diameter	Compression $\alpha \times 195, 215$	Other than Shear reinforcement bar $\alpha \times 195, 215$	Shear reinforcement bar $\alpha \times 195, 215$	Compression $\alpha \times 295, 390$	Other than Shear reinforcement bar $\alpha \times 295, 390$	Shear reinforcement bar $\alpha \times 295, 390$
DB10	216	216	216	327	327	327
DB12	174	174	174	263	263	263
DB16	197	197	197	298	298	298

DB18	191	191	191	347	347	347
DB20	234	234	234	425	425	425
DB22	211	211	211	382	382	382
DB25	209	209	209	378	378	378

- In the cross-sectional calculation of RC beams, the allowable stresses shown in the table above are used. However, since the calculation software is based on Japanese specifications, the test ratios are corrected as follows.
 - a. The cross-sectional area of DB10 is 1.11 times that of the Japanese specification, therefore the Japanese specification will be adopted.
 - b. Since the cross-sectional area of DB12 is 0.89 times that of the Japanese specification, the stress shall be 0.85 or less. ($0.85/0.89 = 0.96$)
 - c. Since DB22 is not currently distributed, DB20 is used, and the calculation is performed as Japanese specification D19. ($1.05/1.00=1.05$)
 - d. Since the cross-sectional area of DB25 is 0.97 times that of the Japanese specification, the stress shall be 0.95 or less. ($0.95/0.97=0.98$)

c) Steel Frame

- Steel frame from Vietnam or Thailand equivalent to JIS G 3101 SN400B or JIS G 3136 SN490B shall be used.

d) Others

- A rough terrain crane will be used for the erection.

(11) Electrical and Mechanical Equipment Plans

1) Electrical Equipment Plans

a) Substation Equipment

- Power draw: There are two possible plans: one is to shut down the existing switchgear and renew the distribution board, on-site trunk line facilities, and other secondary-side facilities after that, and the other is to renew all the facilities after the transformer with new facilities. Therefore, prior application is required and the primary equipment will be transferred to the Electricity Department (EDL) after the installation work is completed and grounding inspection is conducted. The transformers to be renewed will be the oil-filled type, which are common in Thailand and easy to maintain after completion, and dry-type molded transformers will not be used.
- Power reception system: voltage 22KV, secondary voltage 3φ4W 400/230V (5% higher than the voltage used). Transformers, drop hoods, PTs, CTs, meters, and main low voltage switchboards (MDBs) are installed at the ground level, and high voltage transformer panels are not installed.:
- Transformer yard: Considering the site conditions, a transformer yard will not be installed, but a fence will be placed around the receiving pole and main low-voltage distribution panel to prevent third-party contact.

b) Trunk Line Equipment

- Main line equipment: The main line from the electric power distribution panel to the stadium facility shall be laid in an underground wireway, and the cable shall be laid on a cable rack in the facility. CV cables will be laid on cable racks inside the facility. The underground wireway will have protective pipes (E-FLEX pipes) buried around the perimeter of the track, and concrete handholes will be installed.
- Panel configuration: Low-voltage switchboards will be installed in each of the Security Rooms on the 1st floor of the Main Stand and Storage Room 2 on the 1st floor of the Back Stand, and electric distribution panels (for electric outlets) and power control panels (for air-conditioning equipment, pressurized pumps, and nighttime lighting tower equipment) will be located on each floor. Supply voltage: 3 ϕ 4W 380/220V. (Operating voltage)
- Operating voltage: 3-phase power motor / 3 ϕ 380V, air conditioner / 3 ϕ 4W 380/220V, lighting outlet /1 ϕ 220V

c) Emergency Generator Equipment

- An emergency generator will be installed to provide emergency power for lighting and other items necessary for evacuation. 200 KVA and 150 KVA diesel generators will be installed in the space under the scoreboard for the main stand and back stand, respectively, and connected to the low-voltage main distribution panel on the first floor of the main stand and back stand.

d) Lighting/outlet Equipment

- The outdoor floodlight facilities shall relocate the existing floodlight facilities. Four lighting towers shall be positioned around the track.
- Interior lighting will be appropriate for the purpose of the rooms.
- Lighting fixtures will be LED for durability and low power consumption and shall be ceiling-mounted direct-mount type, ceiling-mounted open-bottom type, and ceiling-mounted downlight type.
- Power outlets should be provided in the number necessary for the intended use of each room.

e) Power Supply for athletics systems

- Power for display panels, timers, etc. necessary for track and field events shall be provided.

f) Telecommunications System

- No landline phone will be installed, and communication will be via cell phone.
- Internet connection is not included in the scope of this project.

g) Broadcasting System

- Broadcasting equipment will be installed to enable in-field broadcasting. The main equipment will be installed in the Security Room on the 1st floor of the Main Stand, the connection equipment for operation in the Multi-purpose/Competition Office on the 3rd floor of the Main Stand, and the equipment for the Back Stand in its own rack in the Storage 2 on the 1st floor of the Back Stand.

h) Large Screen

- The large screen shall include a full-color LED display for outdoor use, a tower clock, a 45-minute counter, and a running timer.
- Screen dimensions, display elements, pixel pitch, luminance, etc. shall be planned in consideration of visibility.

i) Sound system

- Sound equipment shall be arranged as necessary by the organizer or user of the convention/event and is not included in the scope of this project.

j) Disaster Management Equipment

- Emergency lighting shall be the spotlight type with built-in batteries.
- Guide lights will be installed at emergency exits and evacuation corridors.

k) Security System

- Surveillance cameras and other security equipment will be installed by the Lao side as necessary and are not included in the scope of this project.

l) Lightning Protection Equipment

- Lightning conductors will be installed at the top of each floodlight and on the roof in both stands to protect the equipment there.
- The scope of protection will cover the newly constructed facility and will protect the area exceeding 20 meters in height.

2) Mechanical Facility Plan

a) Water Supply System

- Water source: It will be supplied by a 75 mm diameter branch from Vientiane's public water supply line.
- Water supply meter: A city water meter will be installed at the city water main intake. There is no special provision for the installation of sub-meters for each tenant.
- Construction classification: The waterworks bureau will perform the installation of the water meter (construction cost will be borne by the MOES), and the work thereafter will be performed by the project management.
- Water supply system: Water is stored in concrete underground receiving tanks, pumped to water storage tanks on the basement floors of each stand by transfer pumps, and water is supplied from the storage tanks to each section by water supply pumps (booster pumps).
- Water supply piping material: White gas pipe and PPR pipe shall be used for indoor piping material, and HDPE pipe for outdoor piping.
- The water supply system in this project is only for the new facilities to be constructed, and water supply to the existing facilities will not be considered.
- Other water supply: The turf in the stadium field will be watered through storage tanks located in both of stands using booster pumps.

b) Hot Water Facilities

- Although water heaters will not be installed under the project, the hot water piping and power supply for the water heaters will be prepared so that water heaters can be installed in the future.

c) Drainage System

- Sewage and miscellaneous wastewater from inside buildings leaves the building in separate pipes, merges in the first sump outside the building, and is carried via a natural slope to the septic tank.
- In the septic tank, wastewater is treated in the following order: solid waste separation, aeration, sediment separation. It then flows to the connected public sewer system (rainwater main).
- Rainwater and drainage from air conditioners will be discharged to the public sewer through the rainwater drainage pipes and catch basins.
- The drainage facilities installed with this work will only be connected in the new facilities built for the Project. Drainage in existing facilities will not be considered.
- Septic tank: Septic tanks will be prepared according to the characteristic of the stadium facilities. The number and locations for the septic tanks will be as follows:
 - A septic tank will be provided for each stand (200-person type, 150-person type), and a septic tank (30-person type) will be provided for each changing room in the main stand.
 - The treated wastewater will be collected in concrete drainage tanks and discharged to the public sewer by transfer pumps.
- Drainage route: The drainage route for soil water and grey water will be separated and those routes will be connected to concrete drainage tanks and then discharged to public sewer.
- Rainwater and drain water from air-conditioner units will join grey water and be collected in concrete drainage tanks and then discharged to the public sewer.
- The system prepared by the project will be used for the project facilities only.

d) Sanitation Fixtures

- Sanitary fixtures such as urinals, wash basins, and cleaning sinks will be provided in the toilets.
- All toilets will be Western-style (low-tank type), and hand washers will be installed.

e) Fire Control Equipment

- Dry chemical fire extinguishers will be installed due to ease of local maintenance.
- Water for firefighting will be drawn from storage tanks prepared in each stand.

f) Air-conditioning Equipment

- Air conditioning system: Separate units will be used instead of a central control system.
- The air conditioner type shall be ceiling-mounted with a sump pump, and the outdoor units shall be installed on the rooftop area for both stands.

g) Ventilation System

- The system will be a mechanical ventilation type.

(12) Equipment Plans

The plan should be narrowed down to the minimum necessary based on the national athlete development plan, frequency of equipment use at national competitions and training sessions, and consistency with the facility plan. The equipment selection criteria are listed below. The display boards, timers, measuring instruments, judging devices, etc. necessary for the track and field events shall be prepared by the event organizers, etc. as necessary and are not included in the scope of this project.

Table 2-10 Criteria of Equipment Selection

Criteria of Equipment Selection	
I	Consistency with the usage of the stadium, utilization plan, target competitions, athlete training plan and user needs
II	Consistency with the facility plan (neither in excess nor insufficient)
III	Consistency with the operation and maintenance structure, personnel assignment and budgetary measures
IV	Sufficiently useful lifespan
V	Appropriate for grant assistance, such as ensuring competitiveness

Source: Study team

The list of equipment is prepared based on the results of the above studies and analysis. The main items are shown as below.

Table 2-11 List of Major Equipment

Item No.	Request No.	Equipment Type	Main specifications	Q'ty	Usage
1	RH-01	Electrical muscle stimulation	Composition: Main unit x1, standard accessories x1 Purpose: Electrical stimulation of nerves and muscles in the lower extremities to improve gait function Type: Floor type Output channels: 4 ch or more Maximum output current: 45m rms or more Caster: Provided on main unit Standard accessories: Provided	1	Rehabilitation
12	EC-01	Elliptical trainer	Composition: Main unit x1, standard accessories x1 Purpose: Low-impact exercises for joints with elliptical exercises Measurable items: Heart rate Digital display: Provided Management functions: Exercise time, calorie expenditure, load level Standard accessories: Provided	1	Exercise
15	EC-04	Treadmill	Composition: Main unit x1 Speed range: 0.8~20 km/h or wider Inclination range: 0~15% or wider Heart rate: Measurable Maximum user weight: 182 kg	1	Exercise
18	EC-07	Dumbbell set	Composition: Main unit x1 Dumbbell type: 1~10 kg, 1 set of 1 kg each, 1 set of 1~20 kg each, 1 set of 1~20 kg each Dumbbells: 1~20 kg, 1 set of 1 kg each Racks: Must hold above items	1	Exercise

25	EC-14	Multi-station exercise machine	Composition: Main unit x1, standard accessories x1 Supported exercises: Bench press, leg extensions, single high row Simultaneous training for several people: possible Training space: 930~4700 x 3279~4700mm Standard accessories: Provided	1	Exercise
26	EC-15	Cable crossover	Composition: Main unit x1, standard accessories x1 Purpose of use: Training of pectoralis major, latissimus dorsi, pectoralis major, serratus anterior, deltoid muscles Maximum weight stack: 47.5kg x 2 sides or more Towing type: Cable type Standard accessories: Provided	1	Exercise
31	BG-01	Side fence for blind soccer	Composition: Main unit x1 Type: Complete set of side fences for outdoor blind soccer court (42 pieces) Standard: Must conform to international standards Material: Aluminum or equivalent	1	Soccer for Physically Challenged
35	BG-05	Goal and net set for soccer	Composition: Main unit x1 Type: Detachable post-mounted, embedded sub-pole type Standard: Conform to FIFA standards Material: Aluminum alloy or equivalent, rustproof and weatherproof Goal net: Provided Net weight: Provided Sub-pole: Provided Turf tray: Provided Extraction jig: Provided Storage cart: Provided Installation parts: Provided	1	Soccer
37	BG-07	Coach bench for soccer	Composition: 8-seat coach benches x2 Material: Aluminum or equivalent (frame), Polycarbonate or equivalent (roof and back)	1	Soccer
38	BG-08	Rugby goal set	Composition: Main unit x1 Type: Removable pole embedded type Material: Aluminum alloy or equivalent, rustproof and weatherproof Post height: GL+9m or more Post diameter: approx. 100 mm Bar diameter: approx. 85 mm Post width: 5,600 mm Bar height: 3,400 mm Turf tray: Provided Protective mat: Provided Storage cart: Provided Extraction jig: Provided Installation parts: Provided	1	Rugby
39	AT-01	Hurdle fences	Composition : Hurdle fences x 100, carrier Hurdle height: Adjustable (762 mm, 838 mm, 914 mm, 1,067 mm) Carrier: Able to store and transport all hurdles	1	Athletics
41	AT-05	Equipment for running commands	Composition: Handheld microphone x 4, start signal x 3, anemometer x 4 Handheld microphone: Megaphone type, dry cell type Start signal: Electronic Anemometer: Handy type, digital display	1	Race Management
54	AF-06	Pole vault equipment	Composition (required): Upright, bar stoppers, support pads, elevating handles, moving equipment, stand-up aids, support fixing tools, support carts, storage cases, bars, bar lifters, altimeters, pole stands, mat carriers Prop model : Single pillar type Adjustable height range: 1,500-6,200 mm or wider Accessories: Manufacturer standard	1	Athletics
55	AF-07	High Jump equipment	Composition (required): Upright, bar stops, bars, mats Material: Aluminum alloy or equivalent (struts), steel or equivalent (base) Mat: Rain cover included	1	Athletics

56	AF-09	Throwing platform	Composition: Main unit x1 Purpose: For throwing competitions for people with disabilities Body material: Metal Body fixing belt: Provided	4	Athletics
57	AF-10	Throwing protection net set	Composition: Set including main body enclosure strut, guard part, strut protection pad, net elevating rope, net lifting pipe and wheel chock for enclosure Type: Movable, net-elevating type Painting: Rust prevention Caster: Equipped with stopper Storage method: Able to be dismantled and stored	2	Athletics
58	AF-11	Javelin set	Composition: 800 g, 600 g, 15 pcs. each Material: Metal (main body) Accessories: Rubber cap for spear, carrying cart	1	Athletics
59	AF-13	Plate set	Composition: 2 kg, 1.5 kg, 1 kg, 10 sheets each Material: (Main body) Glass fiber reinforced resin or equivalent, (edge, frame) steel or equivalent Carrying cart: Provided	1	Athletics
60	AF-15	Ball set for shot put	Composition: 7.26 kg, 6 kg, 4 kg, 3 kg, 10 pcs. each Material: Cast iron Carrying cart: Provided	1	Athletics
61	AF-17	Hammer	Composition: 7.26 kg, 4 kg, 10 pcs. each Material: Cast iron Accessories: Hammer handle, hammer wire, carrying cart	1	Athletics
63	OM-01	Riding lawn mower	Composition: Main unit x1, standard accessories x1 Type: Riding lawn mower Mowing method: Reel cutter type or equivalent Working width: 1,800 mm or more Mowing height: 10 mm to 40 mm or wider Engine: Diesel or gasoline Mowing grass collection function: Provided Standard accessories: Provided	1	Turf Management

Source: Study team

In addition, the list of equipment is as below.

Table 2-12 List of Planned Equipment

Item No.	Request No.	Equipment Type	Q'ty
1	RH-01	Electrical muscle stimulation	1
2	RH-02	Ultrasound therapy machine	1
3	RH-03	High low plinth	2
4	RH-04	Physical therapy bed	3
5	RH-05	Parallel bar	1
6	RH-06	Chair	6
7	RH-07	Partition	1
8	RH-08	Balance trainer	1
9	RH-09	Upper body ergometer	2
10	RH-10	Mirror	1
11	RH-11	Goniometer set	1
12	EC-01	Elliptical trainer	1
13	EC-02	Stair-stepper	1
14	EC-03	Stationary bicycle	1
15	EC-04	Treadmill	1
16	EC-05	Ankle weight	2
17	EC-06	Accessible training bench	1
18	EC-07	Dumbbell set	1
19	EC-08	Barbell set	1

20	EC-09	Kettlebell set	1
21	EC-10	Pull-up frame and bar	1
22	EC-11	Fitness ball	1
23	EC-12	Foam roller	3
24	EC-13	Rehabilitation pole	1
25	EC-14	Multi-station exercise machine	1
26	EC-15	Cable crossover	1
27	EC-16	Leg adduction/abduction machine	1
28	GR-01	Rubber gym tile	1
29	GR-02	Ice machine	1
30	GR-03	Mirror	1
31	BG-01	Side fence for blind soccer	1
32	BG-02	Goal and net set for blind soccer	1
33	BG-03	Ball for blind soccer	10
34	BG-04	Ball basket	2
35	BG-05	Goal and net set for soccer	1
36	BG-06	Flagpole	1
37	BG-07	Coach bench for soccer	1
38	BG-08	Rugby goal set	1
39	AT-01	Hurdle fences	1
40	AT-04	Starting blocks for exercise	18
41	AT-05	Equipment for running commands	1
42	AT-06	Color cards set	2
43	AT-07	Flag set	20
44	AT-08	Track number	1
45	AT-10	Relay baton for training	5
46	AT-11	Stopwatch	15
47	AT-12	Video camera set	2
48	AT-13	Starter stand	2
49	AT-15	Lap count indicator	1
50	AF-01	Tape measure	2
51	AF-03	Throwing distance indicator	2
52	AF-04	Rake	4
53	AF-05	Protect cover for sandpit	4
54	AF-06	Pole vault equipment	1
55	AF-07	High Jump equipment	1
56	AF-09	Throwing platform	4
57	AF-10	Throwing protection net set	2
58	AF-11	Javelin set	1
59	AF-13	Plate set	1
60	AF-15	Ball set for shot put	1
61	AF-17	Hammer	1
62	AF-19	Roll tape	10
63	OM-01	Riding lawn mower	1
64	OM-03	Maintenance tool set	1
65	FA-01	Bed	2
66	FA-02	Wheelchair	2
67	FA-03	Stretcher	2
68	FA-04	Automated External Defibrillator (AED)	1

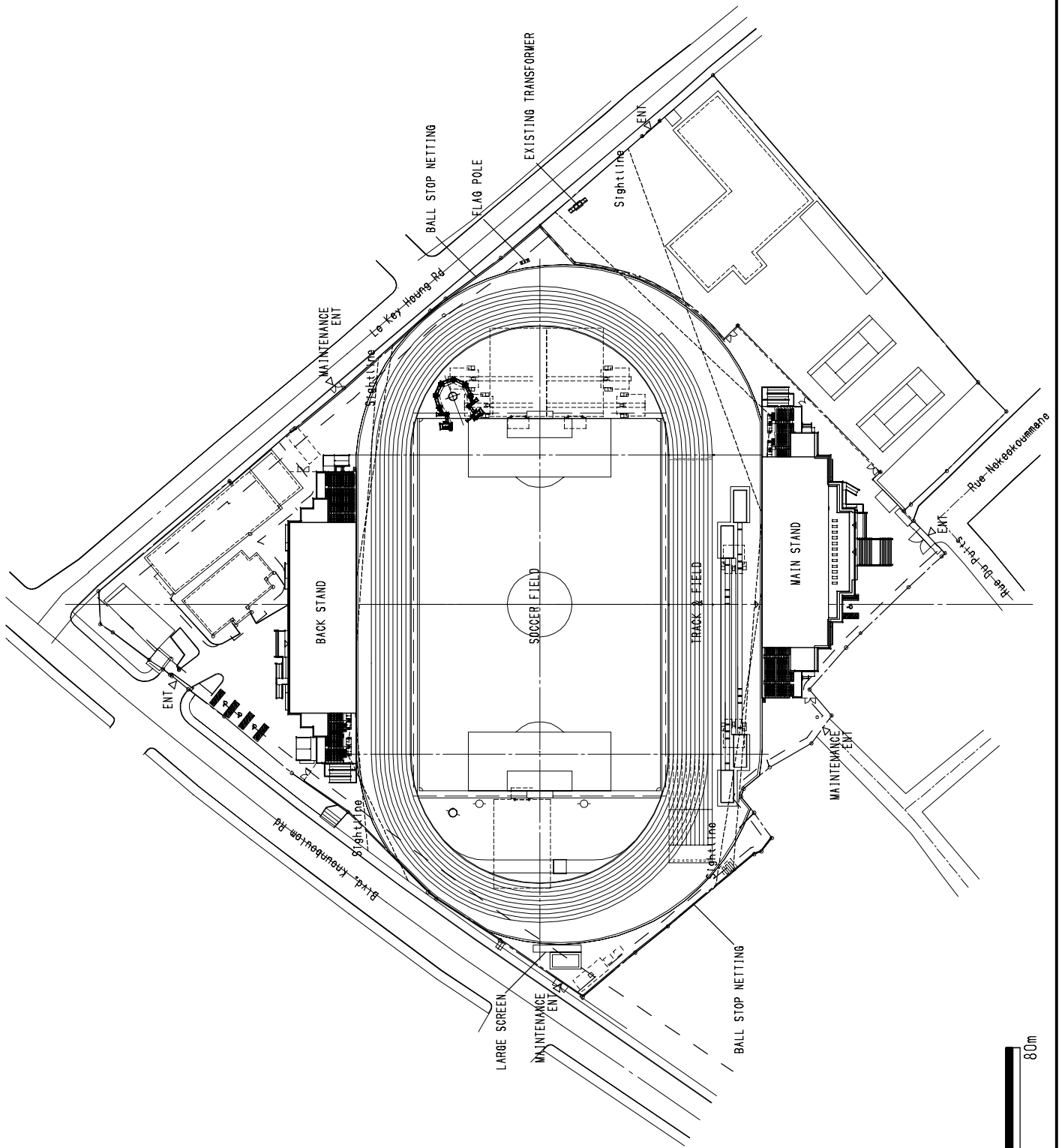
Source:Study team

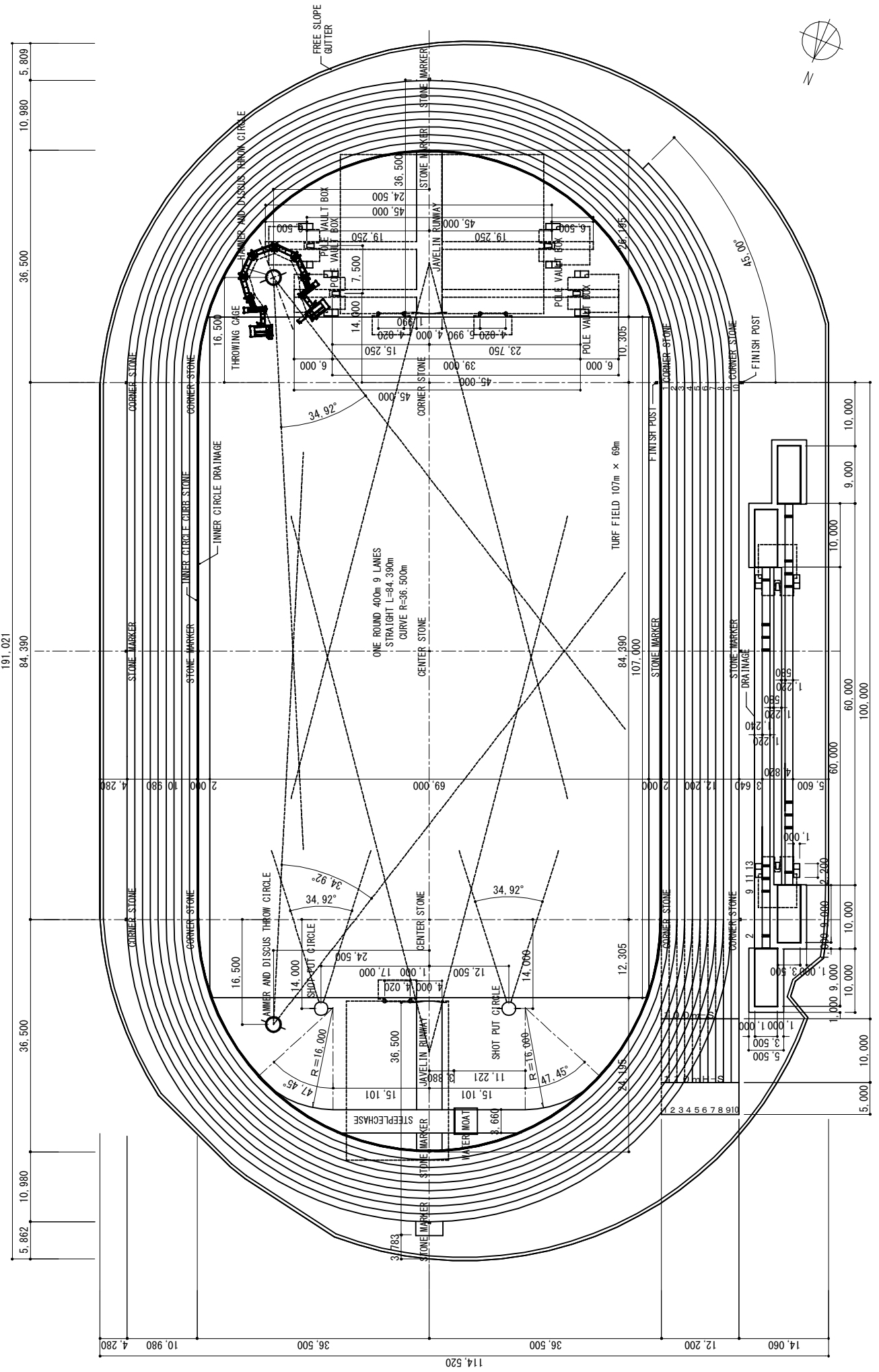
2-2-3 Outline Design Drawings

Table 2-13 List of Outline Design Drawings

Drawing Title	Scale (A4)
SITE PLAN	1/1600
ATHLETICS TRACK FIELD PLAN	1/800
1 ST FLOOR PLAN – Main Stand and Back Stand	1/400
2 ND FLOOR PLAN – Main Stand and Back Stand	1/400
3 RD FLOOR PLAN – Main Stand and Back Stand	1/400
ROOF PLAN – Main Stand and Back Stand	1/400
ELEVATIONS – Main Stand	1/400
ELEVATIONS – Back Stand	1/400
SECTION – Main Stand and Back Stand	1/400

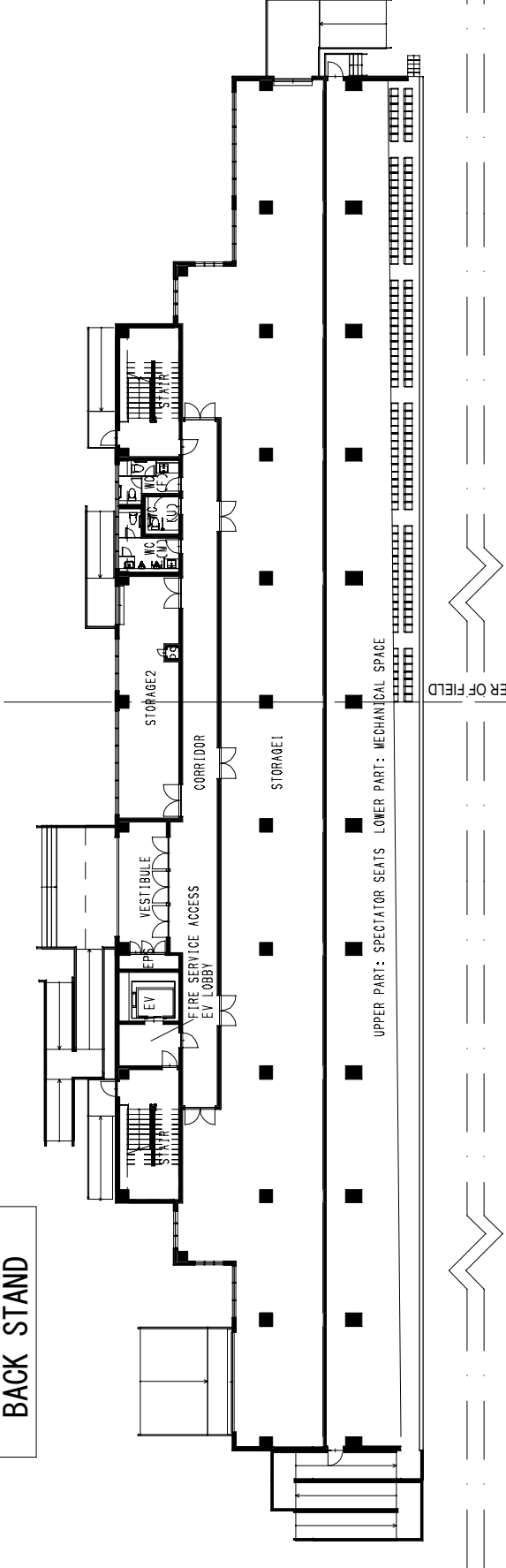
Source: Study team



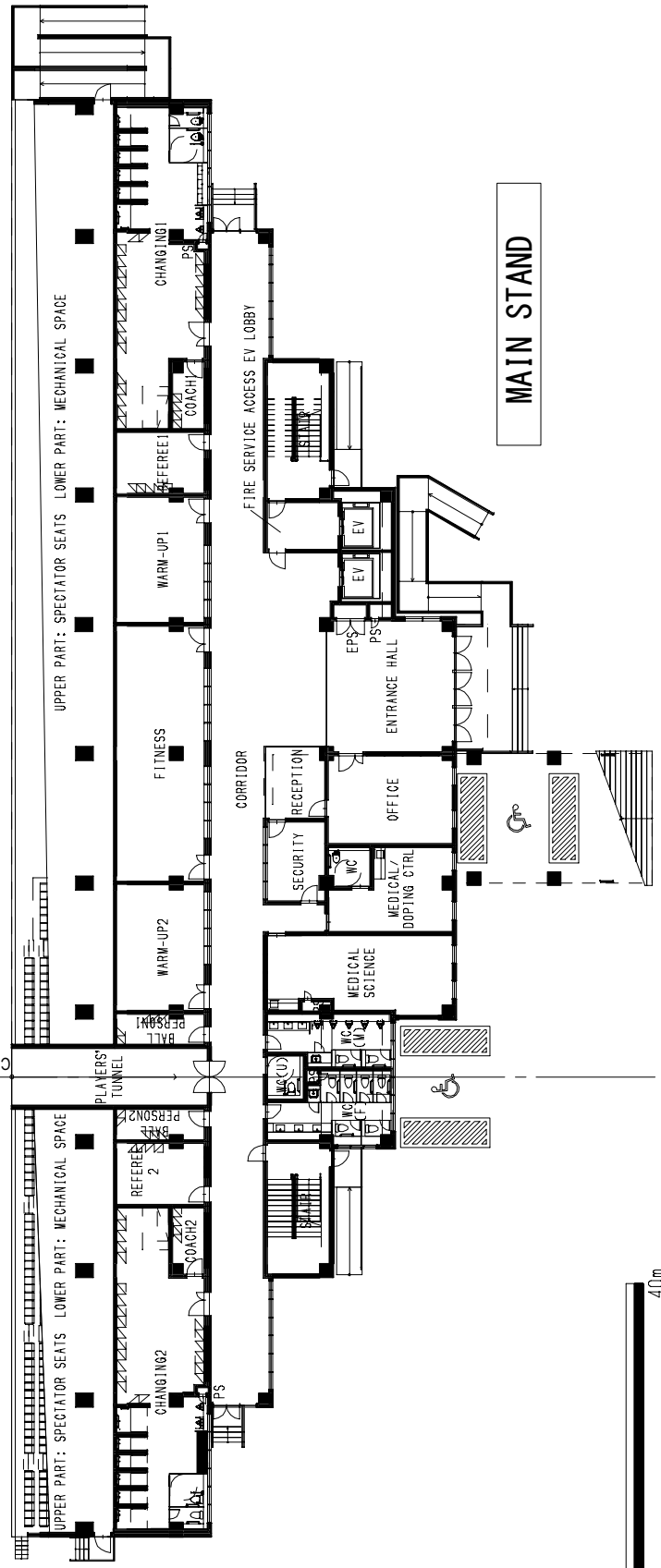


ATHLETICS TRACK FIELD PLAN A4 S=1/800

BACK STAND

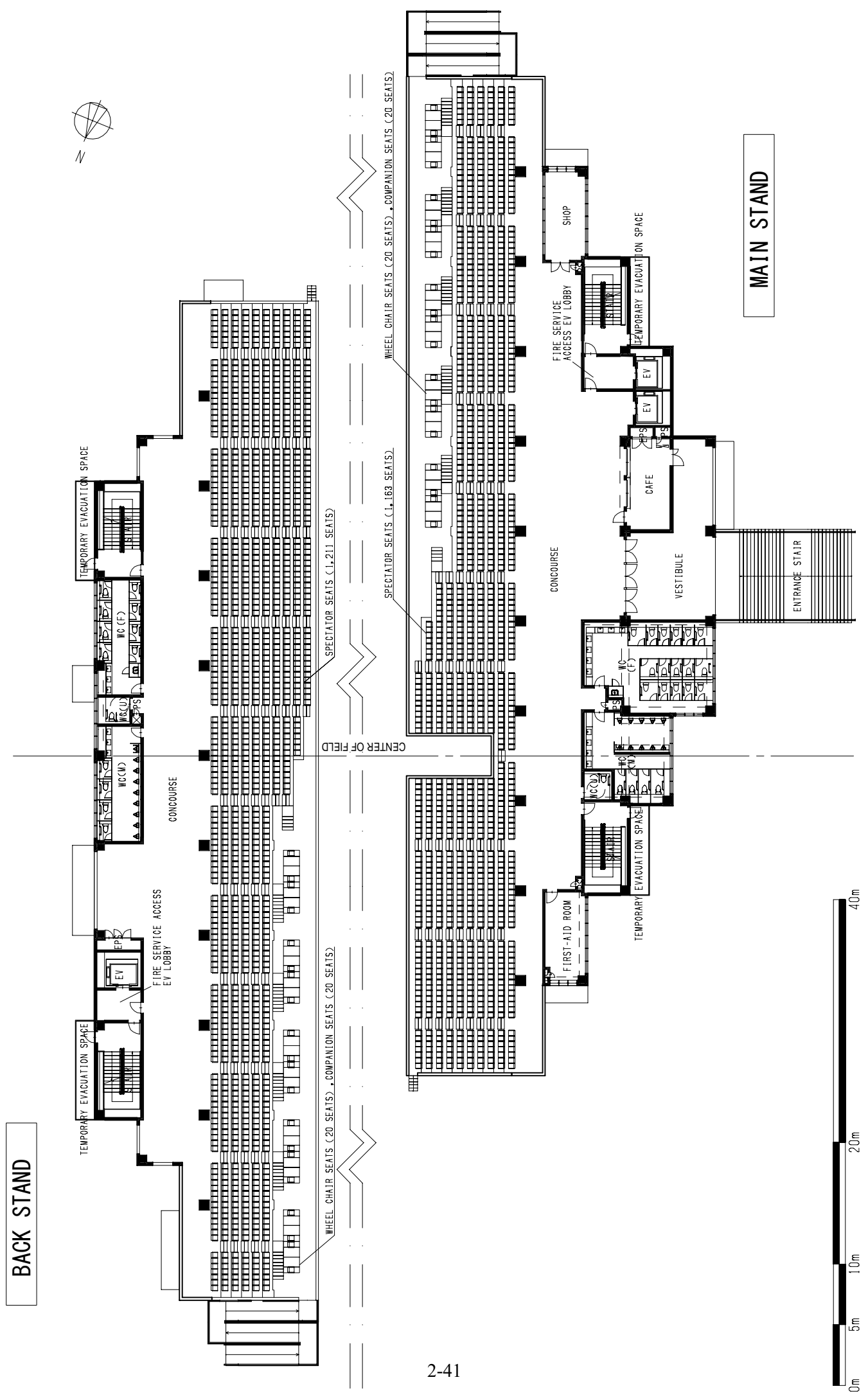


2-40

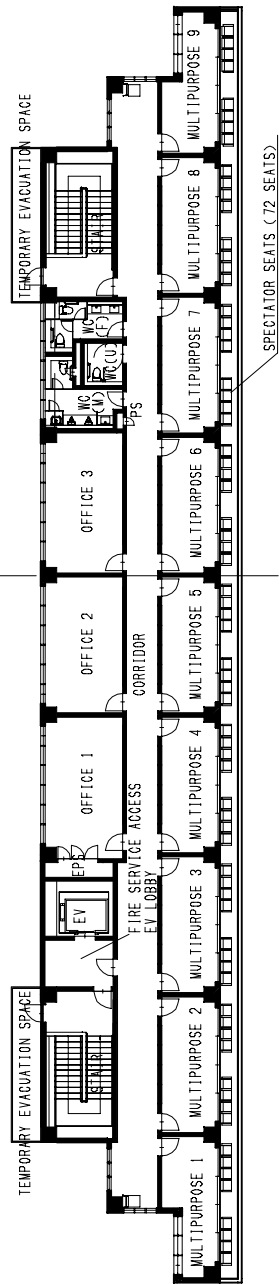


MAIN STAND



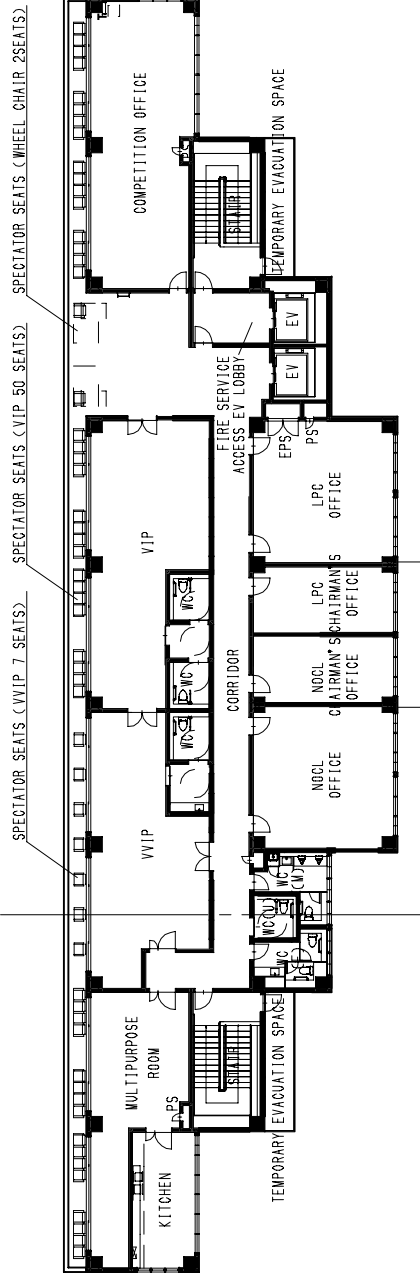


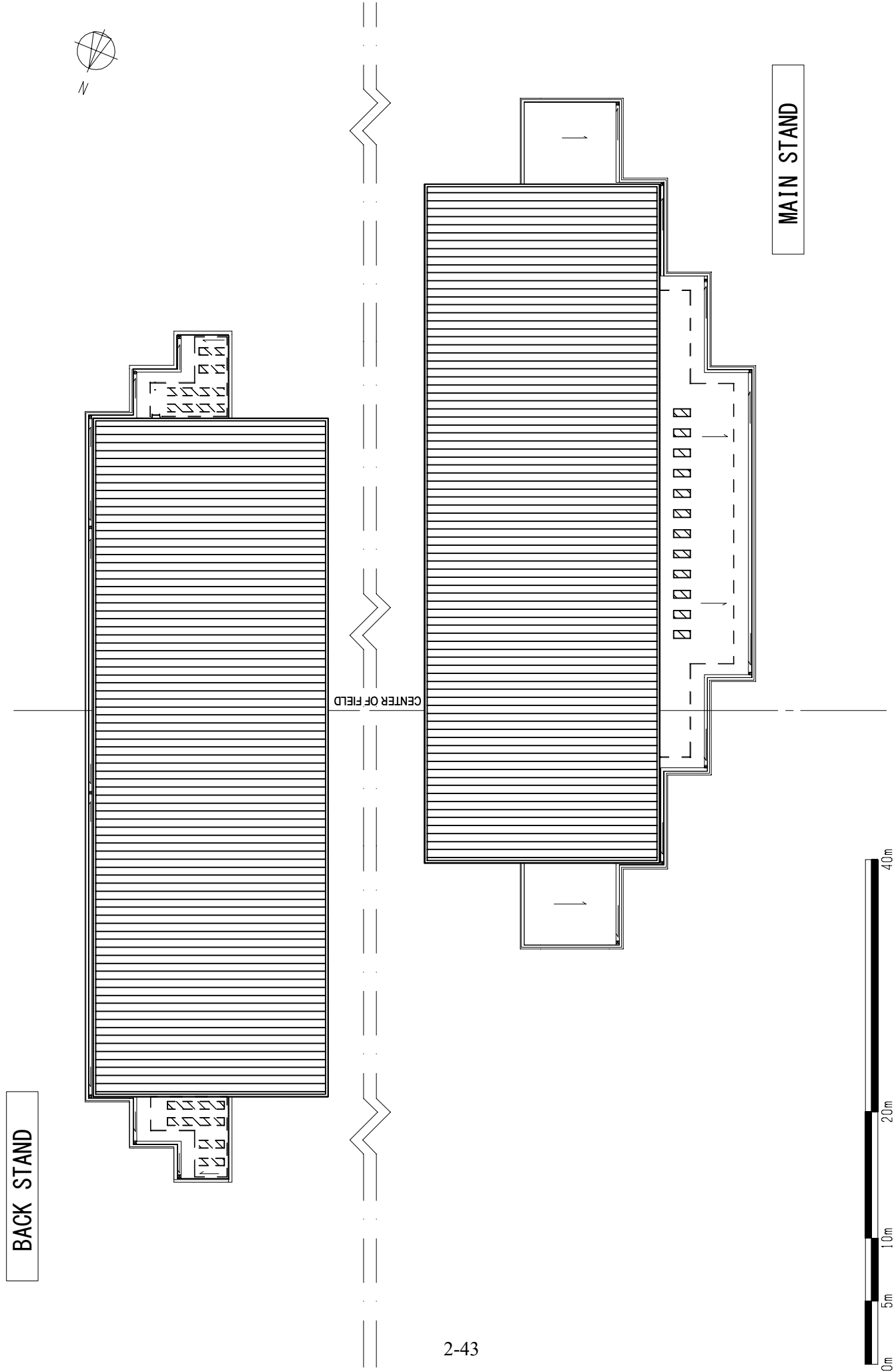
BACK STAND



CENTER OF FIELD

MAIN STAND



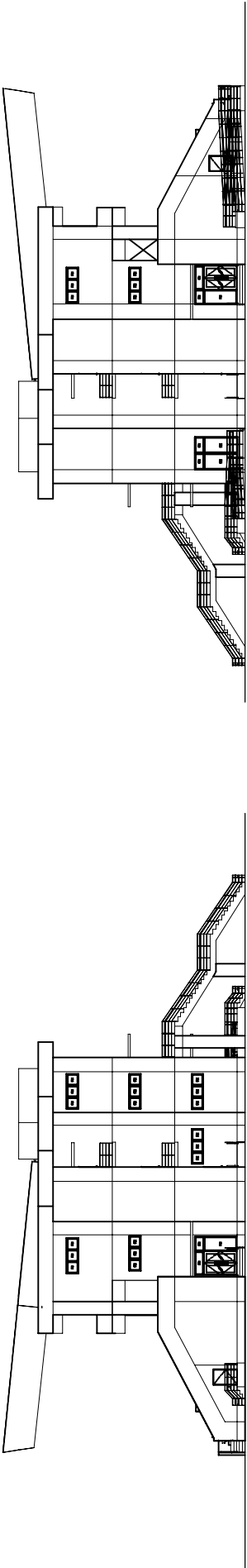


BACK STAND

MAIN STAND

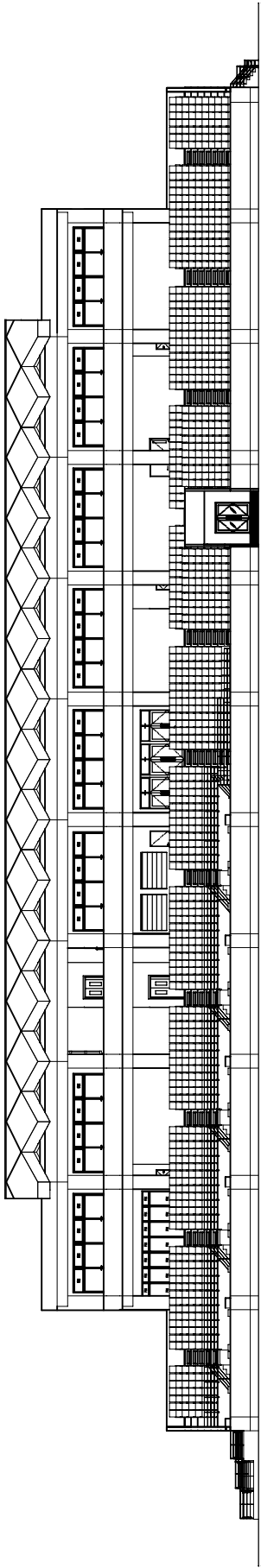
CENTER OF FIELD



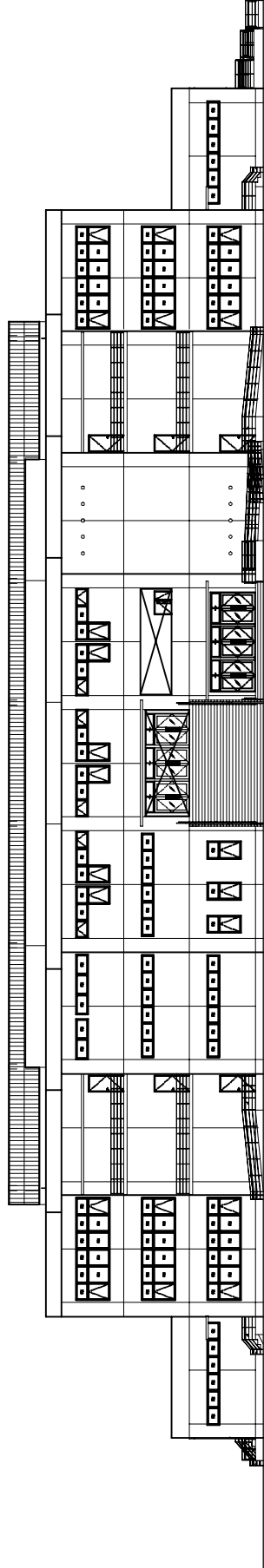


Main Stand - North Elevation

Main Stand - South Elevation

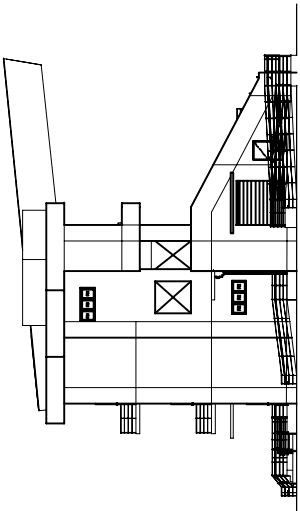


Main Stand - East Elevation

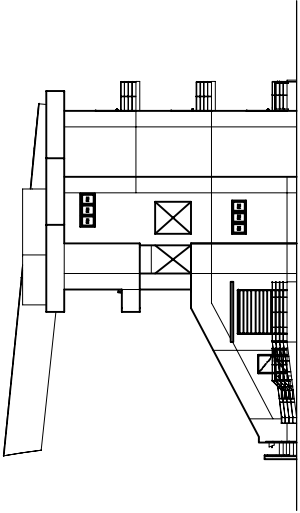


Main Stand - West Elevation

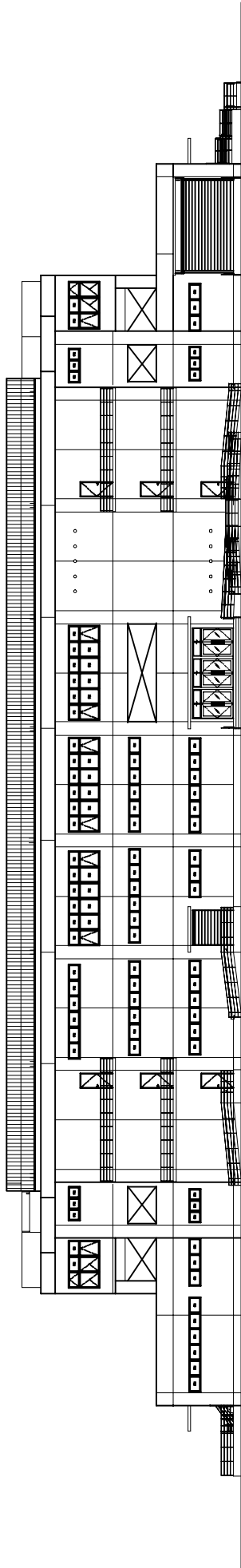




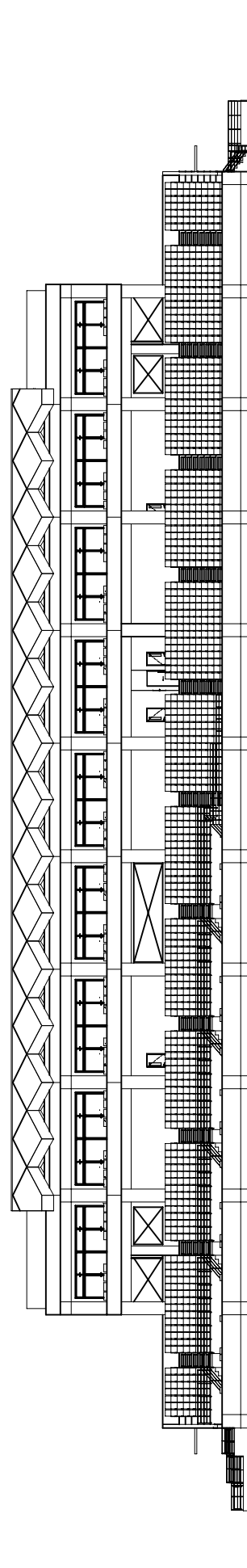
Back Stand -
North Elevation



Back Stand -
South Elevation

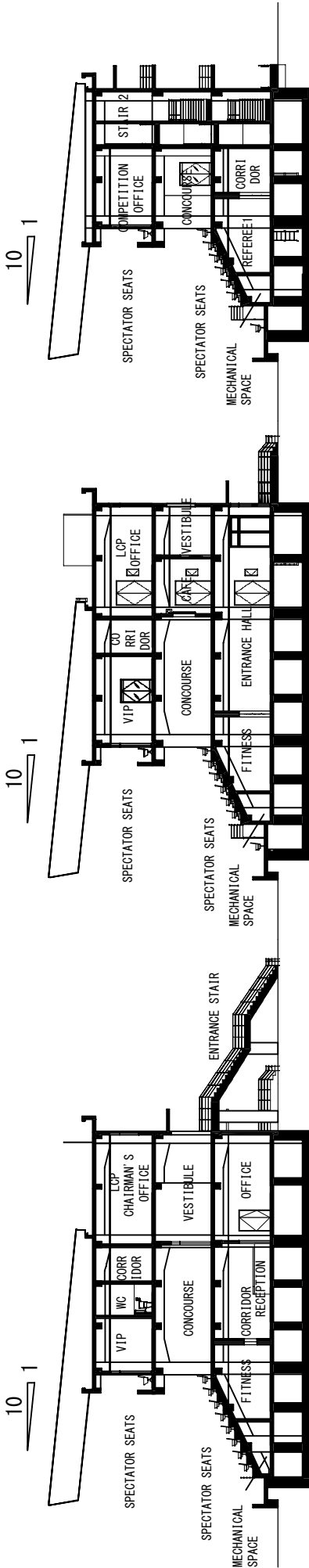


Back Stand -
East Elevation



Back Stand -
West Elevation

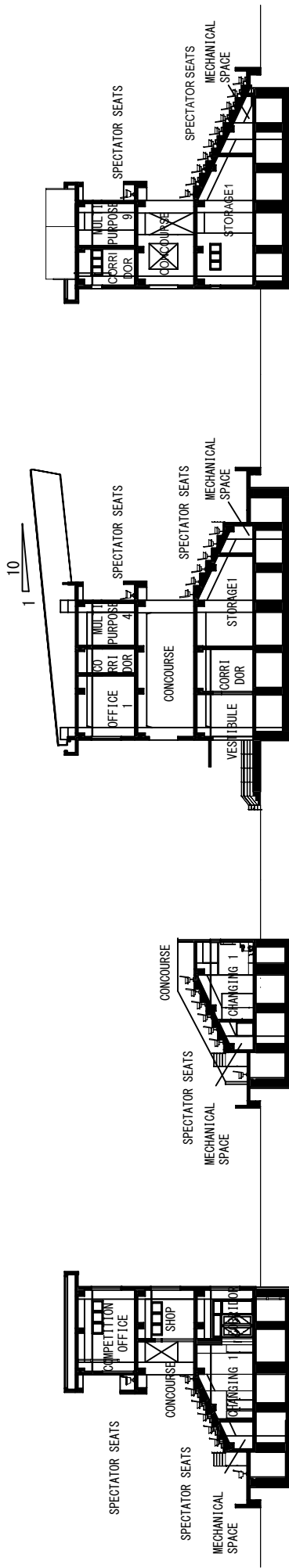




MAIN STAND SECTION A

MAIN STAND SECTION B

MAIN STAND SECTION C

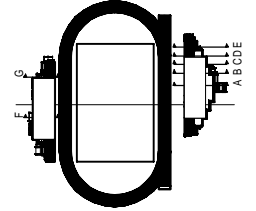


MAIN STAND SECTION D

MAIN STAND SECTION E

BACK STAND SECTION F

BACK STAND SECTION G



2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

The Project consists of facility construction work and equipment procurement and installation work. The scope of cooperation from the Japanese side for the Project will be implemented in accordance with the framework of Grant Aid by the Government of Japan. The Project will be formally implemented after both governments have approved its implementation and signed the Exchange of Notes (E/N) and the Grant Agreement (G/A). After the signing of the E/N and G/A, a consultant contract shall be swiftly concluded between the implementing agency on the Lao PDR side and a Japanese consultant company, upon which implementation design work for the Project will begin. After the implementation design is completed, bidding for Japanese construction contractors and equipment procurement/installation contractors will be conducted. Facility construction work and equipment procurement/installation work will then be implemented by the respective contractors determined by the bidding process. The basic items for implementation of the Project and matters that should be considered are as follows.

1) Implementing Agency

The implementing agency of this Project is the Ministry of Education and Sports (MOES) of Lao PDR. The MOES is responsible for operating and maintaining the facilities built and equipment procured by Japan.

2) Consultant

After the signing of the E/N and G/A by the governments of both countries, the Japanese Consultant will immediately conclude a consultant contract with the implementing agency of the Lao PDR side, in accordance with the procedures for Japanese Grant Aid. In accordance with this contract, the following work will be implemented.

- ① Implementation design: Creation of implementation design documents (specifications related to facilities and equipment included in the Project and technical documents)
- ② Bidding work assistance: Assistance in the selection of construction contractors and equipment procurement/installation contractors through bidding, and work related to contracting conducted by the implementing agency
- ③ Construction/procurement supervision: Supervision of facility construction work and equipment procurement, installation, operational guidance, and maintenance instruction
- ④ Inspections for defects: Work related to inspections for facility defects one year after completion of construction and handover of the facilities, and inspections of equipment prior to expiration of the one-year warranty period

“Implementation design” refers to a process in which, based on this preparatory survey, the details of the architectural plan and the equipment plan will be decided, and bidding documents consisting of specification sheets, bidding conditions, and contract drafts for construction work and equipment procurement will be prepared.

“Bidding work assistance” refers to being present for the selection of construction contractors and

equipment procurement/installation contractors through bidding conducted by the implementing agency, assistance in administrative processes required by each contract, and assistance in making reports to the Government of Japan.

“Construction/procurement supervision” refers to checking whether or not the work by the construction contractor and equipment procurement/installation contractor is being implemented in accordance with the contract and confirming the appropriate execution of the content of the contract. Furthermore, in order to facilitate project implementation, advice and guidance to stakeholders will be provided and coordination between relevant parties from a neutral position will be performed, with the main duties listed below.

- ① Verification and approval procedures for construction plans, construction drawings, equipment specification sheets, and other drawings submitted by the construction contractor and equipment procurement/installation contractor.
- ② Pre-shipment inspection and approval of procured construction materials and equipment, and quality and performance of equipment.
- ③ Checking building facility equipment, equipment procurement/installation, and instructions for use.
- ④ Assessing and reporting construction progress.
- ⑤ Being present for handover and delivery of the completed facilities/equipment.

In addition to engaging in the work above, the Consultant will report on the progress of the Project, payment procedures, and completion/handover, etc., to the relevant agencies of the Government of Japan.

3) Construction Work Contractors and Equipment Procurement/Installation Contractors

The Contractor and the Supplier will be selected through the bidding for Japanese corporations with certain qualifications. In principle, the successful bidder will be determined after negotiations with the lowest bidder and the Contract for construction of facility and procurement of equipment will be concluded with MOES.

The Contractor will construct the facility and deliver the necessary construction materials and the Supplier will procure and install the equipment and provide initial training to the Lao side regarding the operation and maintenance of the procured equipment for based on the Contract. The Contract will also include a one-year warranty by the Contractor and the Supplier to ensure the continuous use of the facility and the equipment after the handover. In addition, the Contract will also include the condition to secure a supply for the consumables required for each piece of equipment, as well as the provision of services such as paid repairs and technical guidance even after the above warranty expires.

4) Japan International Cooperation Agency

The Japan International Cooperation Agency (JICA) will advise the Consultant to ensure that the Project is appropriately implemented in accordance with Japanese Grant Aid schemes. In addition, JICA will hold discussions with the implementing agencies of the Project as necessary to facilitate implementation.

5) Formulation of Execution Plan

Examination of the execution plan will be conducted between relevant parties of the Lao PDR implementing agency and the Consultant during the implementation design period. Additionally, the responsibilities of both the Japanese side and the Lao PDR side will be clarified, the timing for the start of each work item and the methods to be used will be confirmed, and discussions will be held so that the work on both sides is conducted smoothly, based on the implementation schedule of this report.

2-2-4-2 Implementation Conditions

The following points of note must be considered when considering the implementation plan for the Project.

1) Schedule Management

The construction schedule shall be set adequately considering the rainy season being avoided to the greatest extent possible, especially for groundwork, foundation work and track pavement work. Additionally, quality must be ensured by creating a construction schedule that takes into account the necessary curing times for concrete work, plastering work, and painting, etc.

2) Dispatch of Equipment Installation Engineers

For the procured equipment to continue to operate properly and be fully utilized after the Project, it is necessary for the users to fully understand the proper operation and maintenance methods of the equipment. Therefore, the engineer for the installation of equipment must be selected based on the skills for handling the equipment and take sufficient time to explain the usage (operation techniques, easy repair techniques, daily maintenance methods, etc.), while confirming the level of understanding of the person in charge of the equipment. The explanation should be given while checking the level of understanding of the person in charge of the equipment.

3) Safety Management

Since construction work for the Project will be performed on the premises of an existing stadium that includes the currently operating offices of MOES and Laos National Olympic committee and National Paralympic committee, a thorough safety management system is necessary. A temporary enclosure will thus be set up to clearly divide the existing facilities from the construction site, and workers will also be allocated to guide construction personnel and vehicles. Scaffolding will also be set up to provide adequate safety for workers and the surroundings, and to ensure workability. The safety standards conform to the Guidance for the Management of Safety for Construction Works in Japanese ODA Projects of JICA.

2-2-4-3 Scope of Works

The Project will be implemented with mutual cooperation between Japan and Lao PDR. If the Project is implemented with Japanese Grant Aid, the scope of the work responsibilities for each government is as follows.

1) Responsibilities of the Government of Japan

The Japanese side shall be responsible for funding the following work related to consulting, facility construction, and equipment procurement/installation for the Project.

① Consultant work

- i. Creation of implementation design documents and bidding documents for the facilities and equipment covered by the Project
- ii. Assistance in the selection of construction contractors and equipment procurement/installation contractors, and work related to contracting.
- iii. Supervision of facility construction work and equipment procurement, installation, operational guidance, and maintenance instruction.
- iv. Inspections for defects.

② Facility construction and equipment procurement/installation

- i. Demolition of facilities classified as demolition facilities, site clearance and disposal of debris under the Project
- ii. Construction of facilities covered by the Project
- iii. Procurement of equipment and construction materials for facilities covered by the Project and their transport, insurance and move-in to the target facility
- iv. Installation, commissioning and operation test of equipment covered by the Project
- v. Initial training for operation and maintenance methods for equipment covered by the Project

2) Responsibilities of the Government of Lao PDR

The Government of Lao PDR will be responsible for implementing the following tasks related to land preparation on the construction site, infrastructure lead-in to the construction site, and tax exemption measures.

① Banking arrangements and issuance of payment authorizations

② Preparation of construction site

- i. Securing land for the construction site and temporary site
- ii. Lead-in work for electricity and water supply lines to Project facilities and applications procedures for such
- iii. Securing replacement office space for existing offices within the proposed demolition area

③ Exterior construction and others

- i. Planting work
- ii. Purchase and installation of furniture and fixtures

④ Exemption from customs duties, internal taxes, and various financial burdens on the purchase of goods and the provision of services by Japanese workers under a certified contract.

⑤ Provision of support for ensuring swift customs and inland transport procedures for equipment and materials imported from Japan or other foreign country through a certified contract.

⑥ Provision of necessary immigration/visa support for Japanese personnel entering and staying in Laos who are engaged in work related to project implementation.

⑦ Issuance of various permissions necessary for project implementation (building permission, environmental and social impact assessment, application for industrial waste treatment, etc.).

- ⑧ Provision of all necessary costs apart from those falling under the responsibility of the Japanese side.

2-2-4-4 Consultant Supervision

1) Construction Supervision Policy

Based on the policies of Japanese Grant Aid and to enable work to be implemented smoothly, the Consultant will follow the intent of the Outline Design to form an integrated project team to engage in the Project, including implementation design work, and perform construction supervision for the Project based on the following policies.

- ① Meticulous reporting shall be performed so that the stakeholders of both countries are always aware of the status of construction work and equipment procurement.
- ② Guidance and advice shall be provided to the construction work contractors and equipment procurement/installation contractors from an impartial standpoint.
- ③ In order to avoid problems on the site, facility construction work and equipment procurement/installation work will be fully coordinated.
- ④ When handing over the facilities and equipment, it will be confirmed that all of the construction work and equipment procurement/installation work has been completed.
- ⑤ Thorough explanations regarding the operation and maintenance of equipment and facilities shall be provided to their users.

2) Construction Supervision Plan

Due to the diverse range of work items in the Project, one resident supervisor (architectural officer) will be assigned, and the following engineers will be dispatched in a timely manner, according to the progress of the construction work.

- ① Chief consultant (overall coordination, supervises construction schedule)
- ② Architectural officer (communicates design intent, checks construction materials and methods)
- ③ Athletics track officer (communicates design intent, checks construction materials and methods)
- ④ Structural officer (checks ground, foundation work, framework)
- ⑤ Electrical officer (communicates design intent, checks construction materials and methods)
- ⑥ Mechanical officer (communicates design intent, checks construction materials and methods)
- ⑦ Equipment officer (checks equipment procurement and installation, coordinates with facility construction work, checks operation and maintenance explanations)

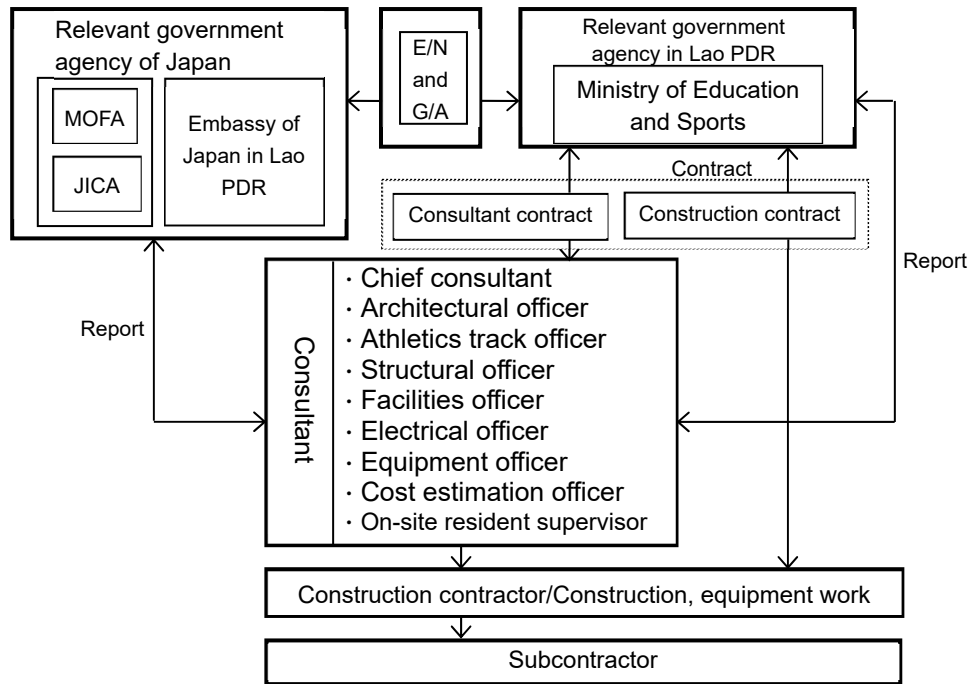


Figure 2-7 Construction Supervision System

2-2-4-5 Quality Control Plan

1) Quality Control Plan for Facilities

The construction contractor will submit construction plan documents to the Consultant in advance, in accordance with the construction contract (drawings, specification sheets, etc.). At the start of construction, the Consultant will check the validity of the construction plan, set specific inspection items and frequency, and work to ensure good quality control.

The main supervision items are shown below.

a) Materials

Construction materials will be received and inspected by the on-site resident supervisor. The items to be checked for the main materials are shown below.

- Rebar mill test certificate, stamp, tensile/bending test results
- Cement test report (chemical composition, physical test)
- Aggregate test report (sieving, density/water supply rate, unit volume mass, organic impurities, abrasion, fine particle content, clay mass, chloride content)
- Fresh concrete mix proportion plan, test mix, acceptance test (slump, flow, air content, temperature, chloride ion concentration, mass), compressive strength test
- Material Certificate for Athletics Track Pavement (World Athletic Certified Material Confirmation)

b) Control standards

The Consultant will supervise construction according to the management standards based on the approved construction plan. In principle, management standards will be based on, in order, 1. the Japanese Architectural Standard Specification for Public Buildings of Ministry of Land, Infrastructure,

Transport and Tourism of Japan, 2. Japanese Architectural Standard Specification “JASS” of the Architectural Institute of Japan, and conform to the construction situation of Lao PDR.

In addition, track and field facilities shall conform to the Track and Field Facilities Manual 2019 Edition (World Athletic), and the soccer field shall conform to Football Stadiums Technical Recommendations and Requirements 5th Edition 2011 (FIFA) for soccer grounds.

c) Bearing capacity of soil

To confirm the bearing capacity of the soil, a flat plate loading test and Standard Penetration test will be conducted on site, in the presence of the resident supervisor.

2) Quality Control Plan for Equipment

Since the equipment procured for this Project is completed products, the quality control of procured equipment will be ensured through pre-forwarding inspection and pre-shipment inspection. Pre-forwarding inspection will be conducted for equipment procured in Japan that cannot be inspected prior to shipping because it is packed by the manufacturer at the factory, etc., and for equipment whose quality cannot be sufficiently verified by pre-shipment inspection. Pre-shipment inspections will be conducted at designated warehouses near the port of loading (or airport) for items procured in Japan or third countries and the inspector will check the contract documents, shipping documents and equipment. The Consultant will outsource the pre-shipment inspection to a third-party inspection agency, and the agency will issue the inspection certificate to the Consultant after the inspection. Upon completion of delivery and installation of procured equipment, all equipment will be inspected against the procurement contract and handed over to the client.

2-2-4-6 Procurement Plan

1) Construction Materials

a) Construction materials in recipient countries

All of the major construction materials used in the Project can be procured within Lao PDR. Construction materials made in Lao PDR are limited to the aggregate, lumber, bricks, and unglazed roof tiles, etc., procurable around Vientiane. Other materials are imported from Thailand or Vietnam, but these goods are generally available through local sales agents. Materials that can be procured within Lao PDR will be used in this Project. In addition, the Project adopts construction methods that can be handled by local construction technology in consideration of future maintenance.

b) Materials procured in Japan and third countries

Although most of the construction materials in this Project are third country origin, it can be procured within Lao PDR in general. Pavement materials for the athletic track and athletic facilities are assumed to be imported from Thailand. The large screen is planned to be Japanese-made products.

The procurement plan for the main construction materials is shown in following table.

Table 2-14 Procurement Sources of Construction Materials

Item	Procurement source			Remarks
	Local	Japan	3 rd Country	
Aggregate	○			
Cement	○			
Wood/Lumber	○			
Reinforcing bar	○			
Steel frame	○			
Bricks	○			
Stone	○			
Floor and wall tiles	○			
Wooden fittings	○			
Aluminum/Steel fittings	○			
Glass	○			
Water proofing material	○			
Plywood	○			
Roof materials	○			
Ceiling board	○			
Paint	○			
Finish hardware	○			
Other hardware	○			
Distribution board	○			
Lighting fixtures	○			
Electrical wire and conduits	○			
Wiring accessories	○			
Switchboards	○			
Transformers	○			
Light electrical equipment	○			
PVC pipe	○			
Sanitary equipment	○			
Pumps	○			
Water receiving tanks	○			
Athletic pavement			○	
Athletic facilities			○	
Turf	○			
Large screen		○		

Source: Study team

2) Labor Procurement Conditions

Large-scale construction projects are being carried out in Vientiane. Therefore, it is possible to procure skilled workers for general construction work. Since this Project will be implemented in the capital city, there will be no problem in procuring skilled workers, and regular and light duty laborers.

In addition, this Project adopts local construction methods at the technical level of local companies so they are able to work under the supervision of a Japanese construction company. However, if necessary, procurement of engineers and technicians from Japan or a third country will be considered.

3) Equipment

The equipment to be procured for this project will be mainly from Japanese manufacturers, but some equipment will be from third-country manufacturers to ensure competitiveness. In setting procurement terms and conditions, from the viewpoint of after-sales service, general-purpose specifications will be applied for the equipment so that consumables and replacement parts can be procured in Vientiane City. It is confirmed that there is at least one distributor in Vientiane that can provide maintenance services for fitness and other sports equipment. In addition, for lawn mowers, a service center in Thailand will provide after-sales service for Laos.

2-2-4-7 Operational Guidance Plan

The equipment planned for this project is intended to be used for track and field competitions, rehabilitation and fitness in the facilities attached to the stadium, and stadium operation and maintenance, respectively, and it is recommended that engineers with sufficient expertise in each field be engaged in the installation work. Therefore, considering the degree of difficulty of installation, commissioning and operation test, the plan is to dispatch engineers from the manufacturer's headquarters in Japan or from the local manufacturer's agent. The engineers dispatched from each manufacturer or manufacturer's agent will consistently implement installation, commissioning, operation test and initial training. Local procurement management personnel (Japanese) will be assigned for the entire period from the start to the completion of the installation work to manage the installation engineers.

2-2-4-8 Soft Component (Technical Assistance) Plan

The facilities to be developed under this project require maintenance and upkeep as described in “2-4-2 Maintenance Plan.” When the facilities are put into service, a Lao-language manual for facility maintenance and management will be prepared, and “technical guidance to promote understanding of maintenance and management tasks as a manager” will be provided to those in charge of facility maintenance and management, thereby supporting maintenance and management activities. For details, please refer to the Soft Component Plan in the attached document.

2-2-4-9 Schedule

1) Project Implementation Schedule

For implementation of the Project using Japanese Grant Aid, after the Exchange of Notes (E/N) and Grant Agreement (G/A) is concluded between the two countries, bidding and contracting for the construction work and equipment procurement will be performed, after which facility construction, equipment procurement, and installation work will be implemented in multiple fiscal years. The approximate time needed for the detail design work, bidding work, construction and procurement work, and soft components is shown in following table.

Table 2-15 Project Implementation Schedule

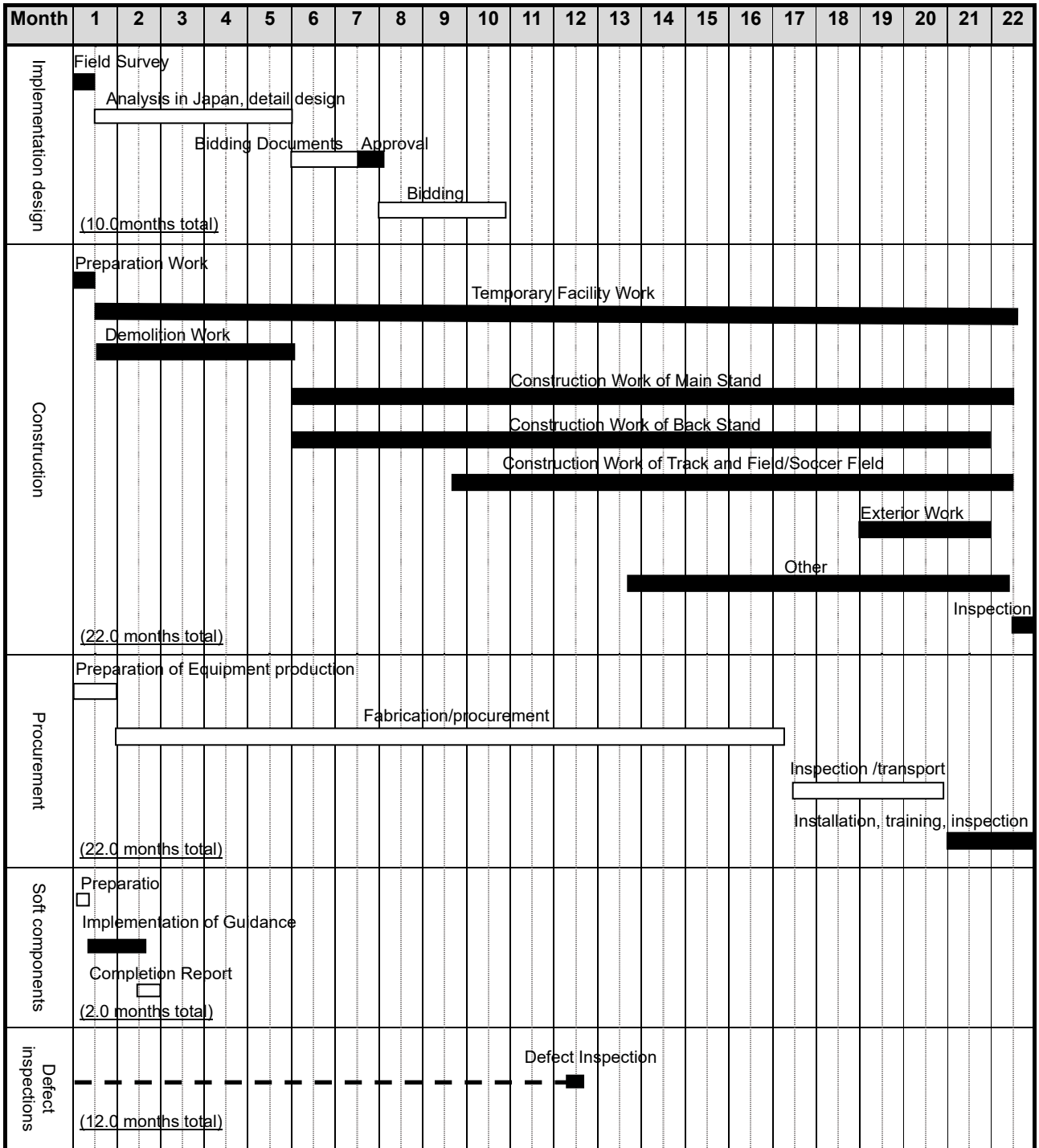
Project components		Period
Implementation design	Detail design (including field survey)	5.0 months
	Bidding	5.0 months
Construction/procurement	Construction and procurement	22.0 months
Soft components		2.0 months

Source: Study Team

2) Implementation Process Schedule

The schedule for project implementation processes is shown in following table.

Table 2-16 Implementation Processes Schedule



Work in Lao PDR
 Work in Japan

2-3 Obligations of the Recipient Country

The division of work for the Project is as described in the previous section 2-4-3 Scope of Works. The following is an overview of the obligations of the Lao PDR side.

(1) Procedures

1) Acquisition of Land

The construction site is located on land owned by the MOES.

2) Application for Building Permit

A building permit must be obtained from the Ministry of Public Works and Transportation (MoPWT). To obtain the building permit, the deed for the land, Neighborhood Agreement, Environment Compliance Certificate, Drawings (Layout drawings, Architectural drawings, Structural drawings, Mechanical drawings and Electrical drawings) shall be submitted to MoPWT; it will take one month for the building permit to be issued.

In addition, prior to applying for a building permit, MoPWT shall conduct a site survey, which takes approximately one week. The building permit process must be completed by the commencement of the construction work (including demolition).

3) Industrial Waste Disposal

The Project requires the issuance of a letter from the MOES to the Vientiane Municipal Services Department notifying them of the disposal of industrial waste. No special permit application is required.

The letter shall include the projected total weight of the waste. No drawings or other documentation need to be attached. The disposal site is a landfill area approximately 32 km from the center of Vientiane.

Although the waste is not specifically segregated, the size of each waste item should be within a 1-meter cube. If the waste contains chemicals or explosives, it shall be necessary to consult with the Ministry of Natural Resources and Environment (MoNRE).

4) Environmental and Social Impact Assessment

An Environmental and Social Impact Assessment (ESIA) is required in accordance with the Environmental Protection Law (Revised Version) No.29/National Assembly dated 18 December 2012. ESIA shall be conducted in accordance with the Decree on Environmental Impact Assessment No.389/Government dated 20 October 2022.

The assessment is divided into two categories: Category 1, which requires only an Initial Environmental Examination (IEE), and Category 2, which requires ESIA. Both Categories require Environmental and Social Management and Monitoring Plan (ESMMP).

According to the Agreement on the classification of investment projects or activities in environmental impact assessment No.358/MoNRE dated 24 February 2023, this project, which is construction of sports-physical infrastructure located in socio-economic areas conducive to investment, and land area from 3 - 10 hectares per one project or activity, is classified as Category 1.

Since it takes about 6 months from the initial screening to issuing the Environment Compliance Certificate, it is necessary to start the IEE at least 8 months before construction starts. The items to be assessed are the number of affected households, noise, air pollution, water quality, and resettlement. The assessment covers both the construction period and the post-completion period. In addition to the preparation and submission of a report prior to the start of construction, five public hearings must be conducted.

Monitoring will be required during construction and after completion. Monitoring will be conducted by the MoNRE or a subordinate organization. Monitoring fees must be paid by the Recipient. The monitoring period will be determined during the review of the Environmental Compliance Certificate.

5) Tax Exemptions

The MOES and other relevant organizations will perform tax exemption procedures for the duties, Value-added Tax, other internal taxes, and surcharges, etc., imposed on construction materials and equipment procured from within Lao PDR or imported from other countries by Japanese companies and construction contractors for the Project. According to the Decree on the Management and Utilization of Official Development Assistance (2019/Lao Government) and the Guideline on the Management and Utilizations of Government Counterpart Funds for the implementation of Official Development Assistance Projects (2020/Ministry of Planning and Investment), it stipulates that the implementing agency shall apply to the Ministry of Planning and Investment for the tax-exempt amount of official development assistance as a counterpart fund. After approval by the Ministry of Planning and Investment (MPI) and Ministry of Finance, the tax exemption must be approved by the National Assembly. It is necessary to apply by 15th May of the year before tax exemption is implemented.

The tax exemption procedures for each tax category are as follows.

- ① Corporate tax: Tax exemption for only the prime contractor
- ② Personal income tax: Tax exemption for only the prime contractor
- ③ Value-added Tax (VAT): Tax exemption for only the prime contractor

For the three tax exemption procedures above, the implementing agency (MOES) will apply for the exemptions to MPI. After approval from the MPI, the Ministry of Finance and National Assembly, the Tax Department issues the tax exemption certificate.

- ④ Import duties: Tax exemption for only the prime contractor and importer

For the fourth tax exemption above, the contractor must create a master list of the imported materials and submit it to the MPI via the implementing agency (MOES). After approval, the Ministry of Finance will issue the tax exemption certificate. The contractor is to submit this certificate to the customs clearance office.

6) Facilitation Regarding Equipment and Materials Imported from Japan or Third Country

The MOES will provide the necessary facilitation ensuring swift customs clearance and inland transport procedures for equipment and materials required for the Project that are imported from Japan or a third country.

7) Acquisition of Land Use Permits

Since the construction site for this Project is owned by the Ministry of Education and Sports, there is no need to obtain a land use permit.

8) Banking Arrangements and Issuance of Payment Authorizations and Payment Certificates

The MOES will act as the point of contact for the Project, promptly making banking arrangements and issuing authorizations to pay and issuing or approving certificates for payments based on the consultant contract and contractor contracts.

(2) Undertakings of Lao Side

A summary of the Lao PDR side undertakings that are essential for the smooth implementation of the Project is shown below.

1) Development of Infrastructure

① Electricity

The Lao side shall be responsible for the prior application and the main low-voltage switchboard. The project scope of work shall include the installation of all equipment and materials, including the pull-in poles, and the complete set of work from the main low-voltage switchboard onward.

② Telecommunications

The installation of equipment and materials in the facility will be within the scope of this project, and the provider contract and other normal utilization costs will be shared by the Lao side.

③ Water supply

The Lao side shall be responsible for the prior application, water meter, and the partition valve from the city water supply. The construction of the complete set of facilities such as distribution for new facilities after the water supply meter shall be within the scope of this project.

④ Drainage

The Lao side will be responsible for the pre-application and connection work. The construction of a complete set of equipment in the new facility shall be within the scope of this project.

2) Relocation of Existing Equipment and Furniture

The Lao PDR side shall be responsible for the relocation and storage of existing equipment and furniture following the demolition of the existing facility.

3) Alternative Location of Existing Buildings amid New Construction

In addition to the existing stadium, the existing office of the Sports Coordination Division, Elite Sports Department and Lao National Anti-Doping Organization, and International Cooperation Department offices are demolished and the new offices are installed on the 3rd floor of the new back stand under this project. Therefore, temporary new locations for the departments are necessary during the construction

period. In addition, the existing stadium also houses the offices of the various sports federations, athletes' dormitories, medical science rooms, and training facilities, so these rooms need alternative locations too. The Ministry of Education and Sports has other offices in Vientiane, so these alternative locations can be found on the Lao side.

2-4 Project Operation Plan

2-4-1 Operational Structure and Organization

Operation and maintenance of the facilities to be developed under the project will be handled by the “Asset Management Division” of the “Permanent Secretary Office” of the MOES. The division is composed of the Administrative Unit (2 staff members), Service Unit (1 staff member), and Technical Unit (2 staff members). All five staff members in the division are regular employees. The division chief and the staff in the Administrative Unit both have expertise in administrative law and have more than 20 years of professional experience. The staff member of the Service Unit has 20 years of professional experience, and the two staff members of the Technical Unit are an architectural expert with more than 20 years of professional experience and an electrical expert with 13 years of professional experience. The Administrative Unit is responsible for the management of the stadium in terms of event programming, publicity, attraction, promotion of use, and development of rules and guidelines for use, supported by the Elite Sports Department and the Sports for All Department. The Service Unit is in charge of receiving reservations for use, renting out facilities, and selling tickets, while the Finance Division of the Permanent Secretary Office is in charge of collecting fees, accounting, and the operating budget. The Technical Unit is in charge of facility maintenance and management.

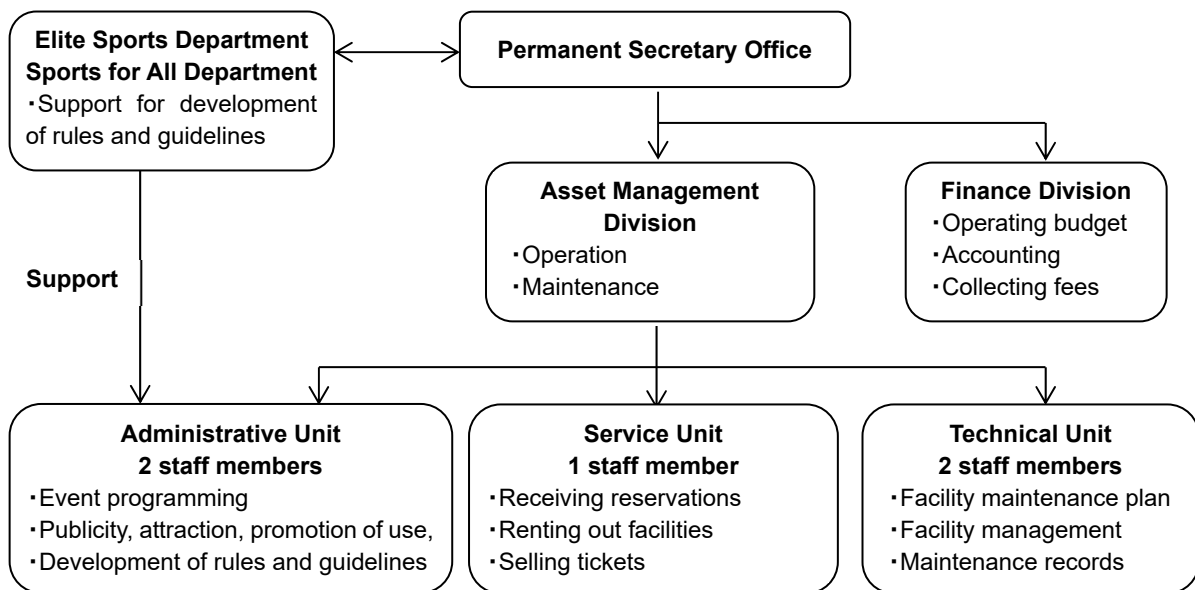


Figure 2-8 Operational Structure and Organization Chart

2-4-2 Maintenance Plan

(1) Facilities

1) Operation and Maintenance System

The staff of the Technical Unit of the Asset Management Division of the Permanent Secretary Office,

which is in charge of maintenance and management of the facilities to be developed under this Project, have never received training in the maintenance and management of athletic facilities, soccer fields, or stadiums. The maintenance and management currently in place are limited to checking the operation of electricity (lighting) and water supply (for turf) when the stadium is to be used.

Therefore, with regards to the maintenance of turf of the soccer field, the technical unit shall be supported and guided in its maintenance by the maintenance specialist staff of the Lao Football Federation, which is regularly instructed by FIFA to maintain the turf of the soccer field for the new national stadium.

Due to the limited number of staff members in the Technical Unit, it shall formulate a maintenance management plan, manage and record its implementation, and subcontract the implementation of the facility maintenance, building maintenance, daily cleaning, and facility security required for stadium maintenance to specialized contractors.

Security guards are hired to provide daily security for the facility. During the event, the event organizer is responsible for setting up the venue, placing, guarding, and guiding competition equipment, as well as cleaning up and putting equipment away after the event.

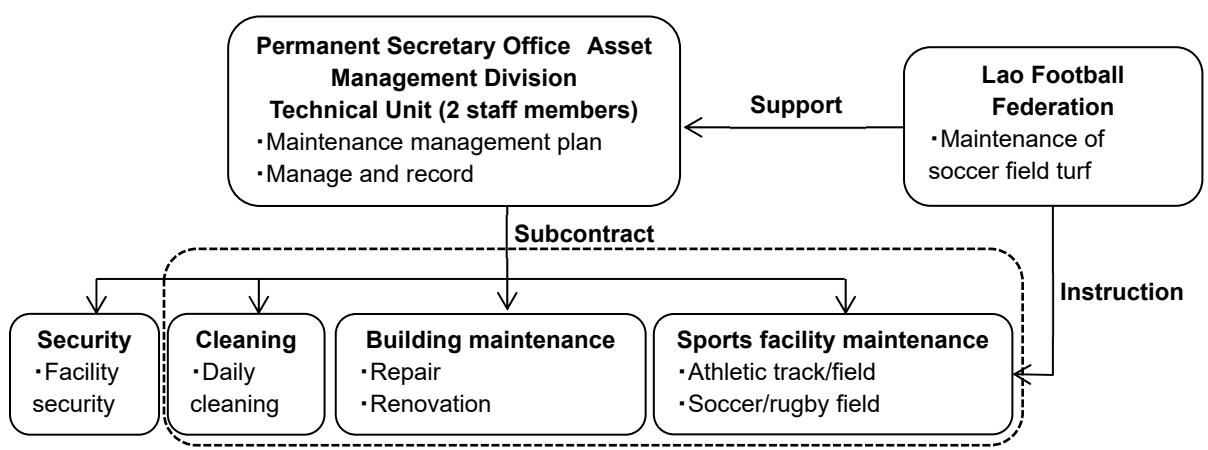


Figure 2-9 Organization Chart of Asset Management Division for Facility Maintenance

2) Maintenance Plan

a) Athletics track

Daily maintenance of the track requires sweeping, inspection of the paved surface and athletic facilities, and cleaning of the gutters. It will be necessary to hire at least two sweepers one day a week. In addition to daily maintenance, the pavement needs to be repaired approximately every five years, as shown in the table below. The service life of the track pavement envisioned in this project is approximately 25 years, and the track portion will then need to be completely repaired, and the asphalt pavement underneath will need to be renewed as well. In addition, the crossing boards used for the long jump and triple jump will deteriorate with use and will need to be renewed every year.

Table 2-17 Athletics Track Maintenance Plan

Years after construction	Repairs	Repair scope
5 years	Partial overlay of start and crossing area	Approximately 1/20-1/50 of total
10 years	Partial overlay of start area, crossing area, track 1-2 lanes, and straight runway area	Approx. 1/10-1/20 of total
15 years	Full overlay	100% of total
20 years	Partial overlay of start area, crossing area, track 1-2 lanes, and straight runway area	Approx. 1/10-1/20 of total

Source: Study Team Note: "Overlay" restoration method cuts 2 mm off surface layer of urethane pavement and adds 3 mm.

b) Turf

The daily maintenance of the turf on soccer and rugby fields requires mowing, fertilization, watering, aeration, vertical cutting, sand spreading, and other operations as shown in the table below. It is necessary to expose the turf to sunlight, watering, fertilizing, and mowing repeatedly to form the field, and furthermore, to maintain good condition by aeration, vertical cutting, and sanding. For daily maintenance, it is assumed that three people shall be hired each weekday, as well as a turf management supervisor. In addition, turf damage caused by competition use should be repaired by curing in minor cases, and in severe cases, seedlings should be added, or the turf should be replaced.

Table 2-18 Lawn Maintenance Plan

Classification	Item	Method, Contents, Frequency
Daily maintenance	Mowing	Once per week during rainy season and once every two weeks out of rainy season. Mowing height should be less than 1/3 of grass height.
	Fertilization	Apply fertilizer approximately once per month.
	Watering	Frequency depends on season. Soil under lawn should be just wet enough to change color.
	Aeration	Drill holes in lawn ground to improve soil aeration and drainage and promote lawn root development.
	Vertical cutting	Make incisions 1-30 mm deep below ground surface to cut old turf roots, thereby thinning turf and promoting and invigorating rooting of new shoots. Remove thatch, correct turf grain, and improve drainage.
	Sand spreading	Spread sand to level ground surface, condition soil, protect areas of damaged turf, care for turf after turf replacement, and protect roots after aeration or thatching.
Repairing	Curing and repairing	Curing areas should be clearly marked and fertilizer applied two to three times per month. Watering shall be conducted often to speed recovery. In addition, sprinkle fine sand for protection.
	Seedling	Install unraveling seedlings and protect them until they assimilate as well as curing repairs.
	Replacement	Remove damaged area of turf and replace with new turf.

Source: Study Team

c) Buildings

In order to maintain the constructed buildings in good condition over the long term, daily cleaning and inspections must be conducted, and repairs for wear, damage, and aging must include inspection and adjustment of fixtures, repair of painted areas, repainting, and waterproofing repairs. Four people will be hired for daily cleaning for two days a week.

Table 2-19 Maintenance of Building

Item	Frequency	Method/Contents
Periodical cleaning	Twice a week	Cleaning of rooms and lavatories
	Once a week	Cleaning of common areas, spectator areas, parking lots, and exterior
	Once a month	Cleaning of windows and rooftops
	Once a year	Cleaning of walls and ceilings
Inspection and conditioning of doors and windows	Once a year	Inspection, adjustment, and repair of operation, damage, etc.
Paint repair	Once every 3 years	Repair of scratches on painted surfaces, etc., inspection and repair of condition of substrate, rust on steel parts, etc.
Repainting	Once every 10 years	Repainting of exterior walls, eaves, dustproof paint, etc.
	Once every 15 years	Repainting of interior walls, ceilings, doors, windows, etc.
Waterproofing repair	Once every 10 years	Repair of coating waterproof and sealing
	Once every 20 years	Repair of asphalt waterproofing
Elevators	As needed	On-call maintenance inspections and repairs by specialized contractors
	Once a month	Periodic inspections by specialized contractors

Source: Study team

d) Facilities

For facilities, routine preventive maintenance is important before breakdowns occur.

The service life of building utilities can be extended by correct operation and daily inspection, lubrication, adjustment, cleaning, and repair. For daily inspections, it is necessary to hire an engineer to perform inspections about one day a week. It is important that inspection records are kept for a certain period and utilized for facility maintenance and management.

Electrical facilities

- To prevent electric shock and electrical leakage disasters, periodic inspections of electrical distribution boards, grounding, circuit breakers, and other electrical receiving and transforming equipment are essential.
- Periodic inspection, operation check, and maintenance of generators are also necessary.
- Lighting fixtures should be cleaned regularly to ensure good illumination.

Air conditioning and ventilation facilities

- Air conditioning units, ventilation fans, and other utilities shall be kept clean.
- In addition, internal cleaning, filter cleaning, and replacement shall be conducted periodically.
- It is important to avoid prolonged operation of air conditioning units at extremely low temperatures and to reduce the load on the equipment to avoid the risk of breakdowns and extend service life.

Water supply equipment

- Water quality shall be maintained through periodic cleaning of receiving tanks and water storage tanks and inspection of piping.
- Water supply pumps shall be checked constantly and shall be overhauled periodically.

Drainage facilities

- Users shall be instructed to avoid contamination of drainage pipes.

- Drainage pipes shall be regularly inspected for clogging or damage.
- Septic tanks shall be periodically drained and cleaned.
- Periodic inspection reports of the septic tanks shall be submitted to the Ministry of the Environment regarding the quality of wastewater.

Disaster prevention equipment

- Although periodic inspections and reporting are not required by the Fire Service Law, it is necessary to periodically inspect the operation of disaster prevention equipment such as smoke detectors, emergency lighting, and evacuation guide lights.
- It is necessary to confirm that evacuation routes are secured in case of a disaster.
- Fire extinguishers shall be replaced as necessary.

The following items are required as maintenance of building utilities. Daily visual and operational inspections shall be performed by the technical unit of the Asset Management Division, while technical inspections, repair and cleaning shall be outsourced. The Technical Unit of the Asset Management Division shall arrange and handle these outsourcing.

Table 2-20 Maintenance of Facilities

Item	Frequency	Method/Contents
Power receiving and transforming equipment	Once a week	Visual inspection
	Once a year	Inspection and maintenance by technician
Generators	Once a week	Visual inspection
	Once a month	Operation check (test run)
	Once a year	Inspection and maintenance by technician
Lighting equipment	As needed	Bulb burnout replacement
Induction lamps, emergency lighting equipment	Once a month	Operation check
Air conditioner	Once a week	Visual inspection
	Once a month	Filter cleaning
	Once a year	Cleaning of air control vents
	Once 2 years	Inspection and maintenance by technician, filter replacement
Ventilation equipment	Once a month	Visual inspection, check for abnormal noise
	Once a year	Cleaning of air control vents
Water tanks	Once a week	Visual inspection
	Once a year	Internal cleaning
Water storage tank	Once a week	Visual inspection
	Once a year	Internal cleaning
Water supply pumps/transfer pumps	Once a week	Visual inspection
	Once 10 years	Overhaul, replacement of consumable parts
Drainage	Once a week	Visual inspection
Sanitary fixtures	Once a week	Confirmation of water flow
Septic tanks	Once a week	Visual inspection of water tank, cleaning of debris
	Once 4 months	Sludge withdrawal, drainage tank effluent water quality inspection
Disaster prevention equipment	Once 6 months	Inspection, operation check

Source: Study Team

e) Large screen

The large screen shall be checked about once a month for proper operation, and the LED modules shall be replaced as needed about once every 10 years.

(2) Equipment

The equipment to be installed is expected to be used by people with disabilities, and special attention should be paid to safety aspects. Since basic operations such as daily safety inspections and cleaning are important for the continued use of the equipment, the plan is to focus on these operations during the initial training. Daily visual and operational inspections shall be performed by the technical unit of the Asset Management Division, while technical inspections and parts replacement shall be outsourced. The Technical Unit of the Asset Management Division shall arrange and handle these outsourcing. Although none of the planned equipment will be subject to constant wear and tear, and few parts will need to be replaced on a regular basis, the procurement of replacements will be carried out by the MOES.

Table 2-21 Maintenance of Equipment

Classifications	Consumable parts	Replacement parts
Rehabilitation and fitness equipment	Grease replenishment of instruments and equipment	Electrode pads refrigerant gas for ice machines, handles (rubber, etc.), treadmill belts, leather seats, batteries, paint
Track and field athletics equipment	Replacing batteries in stopwatches and other equipment	High jump and pole vault bars, protective nets, nets for soccer goals, screws and bolts for rugby and soccer goals and coach benches, paint and rustproofing, batteries
Operations and maintenance equipment	Fueling lawn mowers	Tires, blades, oil and fuel for lawn mowers; tires for wheelchairs

Source: Study team

2-4-3 Financial Plan

(1) Expenditures for Stadium Operation and Maintenance

1) Annual cost

Operation and maintenance costs of the stadium to be developed can be broadly divided into utility costs, such as electricity and water charges, and maintenance costs for lawn care, equipment maintenance, and facility repair. These annual maintenance costs are estimated to be approximately 1.2 billion kip. The table below shows the estimated annual maintenance cost of the stadium. The amounts shown are estimated on an annual basis.

Table 2-22 Annual Cost of Stadium

1USD=11,470KIP, 1JPY=100KIP

Expenditure item	Expenditure (KIP)	Convert into USD(USD)	Convert into JPY(JPY)	Remarks
Electricity	80,000,000	6,974.72	800,000	
Water supply	94,000,000	8,195.29	940,000	Including watering lawns
Lawn maintenance	402,000,000	35,047.95	4,020,000	Mowing, fertilizing, aeration, etc.
Maintenance and upkeep of athletics track	105,000,000	9,154.32	1,050,000	Track cleaning, replacement of crossing boards for long jump, etc.

Maintenance and upkeep of building	114,000,000	9,938.97	1,140,000	Cleaning, door/window adjustment, building interior and exterior repairs
Maintenance and upkeep of facilities	414,000,000	36,094.16	4,140,000	Equipment inspection, renewal of lighting fixtures and air conditioning filters, cleaning of water receiving and storage tanks, pump maintenance, septic tank cleaning and sludge removal, maintenance of EVs, large screen, floodlights, etc.
Fuel	2,000,000	174.37	20,000	Fuel for generators
Rehabilitation & fitness equipment maintenance	20,000,000	1,743.68	200,000	Spares, replacement parts, etc.
Track & field athletics equipment maintenance	20,000,000	1,743.68	200,000	Spares, replacement parts, etc.
Operations and maintenance equipment maintenance	10,000,000	871.84	100,000	Spares, replacement parts, etc.
Total	1,261,000,000	109,938.97	12,610,000	

Source: Study Team

2) Expenditures Other than Annual Cost

Along with the annual operation and maintenance costs incurred each year, there are costs to repair the track and to repair the buildings.

a) Athletics Track Repair Cost

It is essential to keep the athletics track in good condition and to continue to be accredited by the World Athletics. The estimated costs of repairing the athletics track are shown below.

Table 2-23 Athletics Track Repair Cost

1USD=11,470KIP, 1JPY=100KIP

Years since construction	Repair Contents	Scope of Repair	Costs (KIP)	Convert into USD(USD)	Convert into JPY(JPY)
5 years	Partial overlay of start and crossing area	Approximately 1/20-1/50 of total pavement area	570,000,000	49,694.86	5,700,000
10 years	Partial overlay of start area, crossing area, track 1-2 lanes, and straight runway area	Approximately 1/10-1/20 of total pavement area	1,320,000,000	115,082.82	13,200,000
15 years	Full overlay	100% of total pavement area	19,800,000,000	1,726,242.37	198,000,000
20 years	Partial overlay of start area, crossing area, track 1-2 lanes, and straight runway area	Approximately 1/10-1/20 of total pavement area	1,320,000,000	115,082.82	13,200,000

Source: Study Team

b) Building Repair Cost

The building will need interior and exterior repainting, and waterproofing. The costs are estimated as follows.

Table 2-24 Building Repair Cost

1USD=11,470KIP, 1 ¥=100KIP

Item	Costs (KIP)	Convert into USD(USD)	Convert into JPY(JPY)
10th year	9,447,000,000	823,626.85	94,470,000
Exterior repainting (including scaffolding)	2,098,000,000	182,911.94	20,980,000
Roof repainting	761,000,000	66,346.99	7,610,000
Renovation of waterproofing	3,460,000,000	301,656.50	34,600,000
Renewal of large screen	3,037,000,000	264,777.68	30,370,000
Overhaul of water supply pumps	91,000,000	7,933.74	910,000
15th year	1,781,000,000	155,274.63	17,810,000
Interior repainting (including scaffolding)	1,781,000,000	155,274.63	17,810,000
20th year	10,008,000,000	872,537.05	100,080,000
Exterior repainting (including scaffolding)	2,098,000,000	182,911.94	20,980,000
Roof repainting	761,000,000	66,346.99	7,610,000
Renovation of waterproofing	3,460,000,000	301,656.50	34,600,000
Renovation of asphalt waterproofing	561,000,000	48,910.20	5,610,000
Renewal of large screen	3,037,000,000	264,777.68	30,370,000
Overhaul of water supply pumps	91,000,000	7,933.74	910,000
30th year	11,228,000,000	978,901.48	112,280,000
Interior repainting (including scaffolding)	1,781,000,000	155,274.63	17,810,000
Exterior repainting (including scaffolding)	2,098,000,000	182,911.94	20,980,000
Roof repainting	761,000,000	66,346.99	7,610,000
Renovation of waterproofing	3,460,000,000	301,656.50	34,600,000
Renewal of large screen	3,037,000,000	264,777.68	30,370,000
Overhaul of water supply pumps	91,000,000	7,933.74	910,000
40th year	10,008,000,000	872,537.05	100,080,000
Exterior repainting (including scaffolding)	2,098,000,000	182,911.94	20,980,000
Roof repainting	761,000,000	66,346.99	7,610,000
Renovation of waterproofing	3,460,000,000	301,656.50	34,600,000
Renovation of asphalt waterproofing	561,000,000	48,910.20	5,610,000
Renewal of large screen	3,037,000,000	264,777.68	30,370,000
Overhaul of water supply pumps	91,000,000	7,933.74	910,000

Source: Study Team

c) Total Expenses Other than Annual Cost

The table below shows a summary by year of expenditures other than annual cost.

Table 2-25 Total Expenses Other than Annual Cost

Contents	Cost (Million kip)	5th year	10th year	15th year	20th year
Athletics track	5th year repairs	570	○		
	10th year repairs	1,320		○	
	15th year repairs	19,800		○	
	20th year repairs	1,320			○
Building	Exterior repainting	2,098		○	○
	Roof repainting	761		○	○
	Interior repainting	1,781			○
	Renovation of waterproofing	3,460		○	○
	Renovation of asphalt waterproofing	561			○

Renewal of large screen	3,037		○		○
Overhaul of water supply pumps	91		○		○
Total cost (million kip)		570	10,767	21,581	11,328
Convert into USD(USD)(1USD=11,470KIP)		49,694.86	938,709.68	1,881,517.00	987,619.88
Convert into JPY(JPY)(1JPY=100KIP)		5,700,000	107,670,000	215,810,000	113,280,000

Source: Study Team

(2) Budget and Revenues of Stadium

The revenue for the stadium is estimated by the MOES to be approximately 2.25 billion Kip. This estimated revenue is categorized into the budget of the MOES, facility rental fees, ticket revenue margin, advertising revenue, merchandising and food & beverage tenant fees, and individual use fees. Of these expenses, those other than the budget of the MOES and facility rental fees are not charged in the current operation, and therefore require a new system to be established in order to be considered as revenues. The following table shows the stadium revenue prepared by the MOES.

Table 2-26 Budget and Revenues of Stadium

1USD=11,470KIP, 1¥=100KIP

Item	Qty	Unit	Unit revenue (KIP)	Revenue (KIP)	Convert into USD(USD)	Convert into JPY(JPY)	Remarks	
MOES Budget								
A-1	MOES Budget	1	Unit	690,000,000	690,000,000	60,156.93	6,900,000	Amount committed to by MOES in letter to Embassy of Japan
Facility Usage Fees								
B-1	Usage fees for private-sector users holding daytime events	6	days	1,200,000	7,200,000	627.72	72,000	Private-sector sports activities Unit price: Basic fee 700,000KIP Ancillary facilities fee 500,000KIP Total 1,200,000KIP
B-2	Usage fees for private-sector users holding night events	6	days	2,350,000	14,100,000	1,229.29	141,000	"Private-sector sports activities *Assumes income although it is at night because of the event, not an official match. Unit price: Basic fee 1,600,000KIP Ancillary facility fee 750,000KIP Total 2,350,000KIP
	Fees for education and sports sector to hold daytime events in collaboration with other institutions							
B-3	1 International/Regional Soccer Competitions (ASEAN Football Championship Qualifying etc.) (3)	3	days	8,750,000	26,250,000	2,288.58	262,500	Unit Price: Basic fee 1,300,000KIP Ancillary facilities fee 750,000KIP Multipurpose room fee 500,000KIP x 11 =5,500,000KIP Cleaning fee 1,200,000KIP Total 8,750,000KIP

	2	Lao League 2 (8)	8 days	8,500,000	68,000,000	5,928.51	680,000	Unit price: Basic materials 1,300,000KIP Substrate material 500,000KIP Multipurpose room usage 500,000KIP x 11 = 5,500,000KIP Cleaning cost 1,200,000KIP Total 8,500,000KIP
	3	Vientiane Capital Secondary School Football Competition (4) Domestic Rugby Competitions (2) International/Regional Rugby Competition (Vientiane 10s Rugby Championship, etc.) (1) International/Regional Para-Soccer Competition (1) Domestic Athletics Competitions (2) Vientiane Marathon (1) Domestic Para-Athletics Competitions (8)	19 days	7,700,000	146,300,000	12,755.01	1,463,000	Unit price Basic usage 500,000KIP Substrate material 500,000KIP Multi-purpose room usage 500,000KIP x 11 = 5,500,000KIP Cleaning cost 1,200,000KIP Total 7,700,000KIP
	4	Blind Soccer Competitions (12) Cerebral Palsy Soccer (CP Soccer) (2) Blind Soccer Activity(1) Handicapped Soccer Activity(1)	16 days	3,200,000	51,200,000	4,463.82	512,000	Unit price: Basic usage 500,000KIP Substrate material 500,000KIP Multi-purpose room usage 500,000KIP x 2 = 1,000,000KIP Cleaning cost 1,200,000KIP Total 3,200,000KIP
		For educational and sporting sector events in daytime						
B-4	1	Events(12) (Japan Festival Lao Trade Union Day Celebration International Women's Day Celebration Lao People's Revolution Youth Organization Day Celebration International Labor Day Celebration International Children's and National Arbor Day Celebration Lao Women's Union Day Celebration International Day of Yoga Lao Sports Day Celebration National Teacher's Day Celebration Lao Against Drugs Day Celebration Lao PDR National Day Celebration)	12 days	7,700,000	92,400,000	8,055.80	924,000	Unit price Basic usage 500,000KIP Substrate material 500,000KIP Multi-purpose room usage 500,000KIP x 11 = 5,500,000KIP Cleaning cost 1,200,000KIP Total 7,700,000KIP
	2	School/College soccer activities (5) Flying Disc (National Championships) (1) Flying Disc (Vientiane Championships) (1)	7 days	3,200,000	22,400,000	1,952.92	224,000	Unit price Basic usage 500,000KIP Substrate material 500,000KIP Multi-purpose room usage 500,000KIP x 2 = 1,000,000KIP Cleaning cost 1,200,000KIP Total 3,200,000KIP

	3	Soccer Referee Training(1) Rugby Referee Training(1) Soccer Coach Training(1) Rugby Coach Training(1)	4 days	1,000,000	4,000,000	348.74	40,000	Unit price Basic usage 500,000KIP Substrate material 500,000KIP Total 1,000,000KIP
B-5		Usage fees of meeting room	48 times	5,000,000	24,000,000	2,092.41	240,000	Special viewing, competition preparation meetings, other meetings
B-6		Usage fees of large screen (Assumed fee for use at conventions and events)	130 hours	50,000	6,500,000	566.70	65,000	For competitions, etc.
Ticket Revenue								
C-1		Revenue from collecting International Rugby Competition ticket margins	1,200 people	5,000	6,000,000	523.10	60,000	Assumption 1: 2 games per year Assumption 2: No. of spectators 600 persons per match Assumption 3: Ticket price 50,000 kip Assumption 4: Margin assuming ticket margin of 10% from MOES presentation Unit Price: 50,000 × 10% = 5,000 kip Quantity: 2 matches × 600 = 1,200
Advertising Revenue (Large screen, Billboard)								
D-1		Large screen advertising broadcast (Revenue from display of advertisements)	600 times	100,000	60,000,000	5,231.04	600,000	Assumption1: Price 100,000KIP Assumption2: Opportunity 60event×10times=600
D-2		Billboard advertising fees (Collection of fees from posting signs, etc.)	16 Unit	50,000,000	800,000,000	69,747.17	8,000,000	Assumption 1: Price 50,000,000 kip Assumption 2: 16 billboards
Merchandise Sales/Food & Beverage Tenant Fees								
E-1		Cafe space rental fees	12 months	4,000,000	48,000,000	4,184.83	480,000	Rent collection from café operators
E-2		Shop space rental fees	12 months	4,000,000	48,000,000	4,184.83	480,000	Rent collection from store operators
Individual Usage Fees								
G-1		Fitness room usage fees (Per-use fee for private users)	9,372 people	15,000	140,580,000	12,256.32	1,405,800	Assumption 1: Usage fee 15,000 kip Assumption 2: No. of users: Male 7,200 people (20 people × 360 days), Female 4,680 people (13 people × 360 days)
合計					2,254,930,000	196,593.72	22,549,300	

Source: Study Team; based on MOES materials * Numbers in () in B3/B4 items indicate the number of days.

(3) Income and Expenditure Projections

The following is an estimate of the revenues and expenditures of the Chao Anouvong Stadium through 2029, the target year for this project (three years after facility and equipment development). Of the

revenues, 690 million kip is expected to be budgeted by the Ministry of Education and Sports. In addition, the cost of repair of athletic tracks, buildings, etc., incurred other than annual cost will be covered from the annual savings in income and expenditures and from the Sports Fund. For any shortfall, the MOES will request the Ministry of Finance to allocate a special budget, separate from the annual budget.

Table 2-27 Projected Revenues and Expenditures of the Stadium from 2025 to 2028

Item	2026 (KIP)	2027 (KIP)	2028 (KIP)	2029 (KIP)
Income	2,254,930,000	2,254,930,000	2,254,930,000	2,254,930,000
MOES budget	690,000,000	690,000,000	690,000,000	690,000,000
Revenue	1,564,930,000	1,564,930,000	1,564,930,000	1,564,930,000
Expenditures	1,261,000,000	1,261,000,000	1,261,000,000	1,261,000,000
Income and expenditures	+993,930,000	+993,930,000	+993,930,000	+993,930,000

Reference value converted into USD

1USD=11,470KIP

Item	2026 (USD)	2027 (USD)	2028 (USD)	2029 (USD)
Income	196,593.72	196,593.72	196,593.72	196,593.72
MOES budget	60,156.93	60,156.93	60,156.93	60,156.93
Revenue	136,436.79	136,436.79	136,436.79	136,436.79
Expenditures	109,938.97	109,938.97	109,938.97	109,938.97
Income and expenditures	+86,654.75	+86,654.75	+86,654.75	+86,654.75

Reference value converted into JPY

1JPY=100KIP

Item	2026 (JPY)	2027 (JPY)	2028 (JPY)	2029 (JPY)
Income	22,549,300	22,549,300	22,549,300	22,549,300
MOES budget	6,900,000	6,900,000	6,900,000	6,900,000
Revenue	15,649,300	15,649,300	15,649,300	15,649,300
Expenditures	12,610,000	12,610,000	12,610,000	12,610,000
Income and expenditures	+9,939,300	+9,939,300	+9,939,300	+9,939,300

Source: Study team

(4) Confirmation and Agreement with Lao Ministry of Education and Sports on Budget

In this preparatory study, the Japanese team showed the Ministry of Education and Sports the relationship between expenditures for stadium operation and maintenance and stadium operation revenues, and the Ministry of Education and Sports agreed on the budgetary measures for the stadium.

2-5 Project Cost Estimation

The cost to be borne by the Lao side for implementing this Project is estimated as below, based on the estimation conditions shown in (2) below.

(1) Expenses Borne by Lao Side

Table 2-28 Expenses Borne by Lao Side

1USD=11,470KIP, 1JPY=100KIP

Expenditure item	Quantity	Unit	Expenditure		
			(KIP)	(USD)	(JPY)
Bank charges	1	Unit	315,111,600	27,472.68	3,151,116
Infrastructure lead-in and connection work	1	Unit	193,020,000	16,828.25	1,930,200
Relocation and procurement of equipment/furniture	1	Unit	325,500,000	28,378.38	3,255,000
Planting	1	Unit	512,000,000	44,638.19	5,120,000
EIA consultant outsourcing fees	1	Unit	643,467,000	56,100.00	6,434,670
EIA application fee	1	Unit	17,205,000	1,500.00	172,050
Construction permit application fee	1	Unit	1,300,000	113.34	13,000
Tax exemption budget (Counterpart Funds)	1	Unit	19,000,000,000	1,656,495.20	190,000,000
Total			21,007,603,600	1,831,526.04	210,076,036

Source: Study team

(2) Estimation Conditions

1) Time of estimate: January 2022

2) Exchange rate: USD 1.00 = JPY 114.70 (avg. rate between October 1 and December 31, 2021)

EURO 1.00 = JPY 131.54 (avg. rate between October 1 and December 31, 2021)

3) Construction/procurement period: As a multiple Japanese fiscal year project, the detail design, construction work, and equipment procurement period will be as shown in the construction schedule.

4) Other: The Project will be implemented in accordance with the Grant Aid scheme of the Government of Japan.

Chapter 3. Project Evaluation

Chapter 3. Project Evaluation

3-1 Preconditions

It is necessary that the following items are implemented without delay as a prerequisite for the implementation of this Project.

- a) Commencement of Initial Environmental Examination by the Lao PDR 8 months prior to bidding, and acquisition of a certificate of compliance with environmental laws and regulations two months prior to bidding
- b) Application for building confirmation and permission by the Lao PDR two months prior to bidding, and issuance of a building permit before construction begins.
- c) Promptly duty-free measures by the Lao side after receiving a master list of purchased or imported materials from Japanese construction companies and suppliers until the commencement of construction or procurement of such equipment.
- d) Prompt procedures for bank arrangements (B/A) and payment authorization (A/P), which are conditions for commencement of construction after the contract of construction
- e) Infrastructure development of the Project site, including electric power, communications, and water supply and drainage by the contract of construction
- f) Smooth performance of other matters to be borne by the other party

3-2 Necessary Inputs by Recipient Country

In order to achieve the overall plan of the Project, it is necessary for the following items to be appropriately implemented or prepared by the Lao PDR.

Before the start of facility use

- a) Allocation of personnel and securing of budgets necessary for the operation and maintenance of the stadium (by MOES)
- b) Acquisition of basic stadium management methods in order to earn business income (by MOES Asset Management Division)
- c) Formulation and implementation of annual usage plans (by MOES Asset Management Division Administrative Unit)
- d) Acquisition of natural grass and stormwater drainage maintenance techniques for soccer fields and implementation of maintenance (by MOES Asset Management Division Technical Unit)
- e) Establishment of emergency and security systems to enable prompt response to injuries, accidents, crimes, disasters, etc., when using the stadium. (by MOES)

During facility use

- f) Support for para-sports (by MOES)
- g) Fund reservation and securing the budget (by MOES), and maintenance of track and field competition areas (by MOES Asset Management Division Technical Unit)
- h) Maintenance and inspection of elevators, septic tanks, equipment, large screen, etc., installed in facilities (by MOES Asset Management Division Technical Unit)

- i) Maintenance and inspection of competition equipment, fitness equipment, and other equipment procured through this project including equipment and owned equipment (by MOES Asset Management Division Technical Unit)
- j) Securing parking lots for tournaments and events, and appropriately responding to the vicinity of the stadium so that complaints and problems do not arise (by MOES Asset Management Division Service Unit)

3-3 External Conditions

The following external conditions affect the implementation of this Project and the achievement of the overall plan.

- a) There are no significant changes in the development plan, sports sector plan, etc., of Lao PDR, which is the premise of this Project.
- b) The finances of the Lao PDR government will not deteriorate due to the need to secure a stadium management budget.
- c) Political unrest, riots, large-scale natural disasters, epidemics, etc., will not occur.
- d) The prices of construction materials, labor, procurement equipment, transportation costs, etc., do not rise sharply.
- e) The exchange rate does not depreciate sharply against the yen.

3-4 Project Evaluation

Based on the following points, the Project is deemed relevant as a project eligible for Japanese Grant Aid.

3-4-1 Relevance

(1) Benefits of the Project

1) Meeting the Needs

The target facility of this Project is conveniently located in the heart of the capital Vientiane. Therefore, it can easily be used for national competitions, Vientiane regional tournaments, daily exercise and games, and sports for the disabled, and it plays an important role in the promotion of sports for the population, as stated in the policy. In particular, the need for such a convenient facility is extremely high as it helps people with disabilities to be independent, participate in society, and to establish an inclusive society through sports. The implementation of this project will meet these needs.

Specifically, it is planned to be used by both people with disabilities and others, by students and adults for national competitions and matches of track and field, soccer, rugby, para-sports, and universal sports, qualifiers for soccer tournaments in the Southeast Asian region, small international rugby tournaments, practice and strengthening training for elite athletes, training for referees and coaches, daily exercise by citizens, national events for national and international anniversaries, etc.

Regarding the number of athletes, there were 439 high school students and 944 adults in Vientiane in 2019, and it is expected that these athletes will use the facilities covered by the project for practice, intensive training, regional and national competition finals, etc.

Regarding soccer, there is a need for high school and adult teams in Vientiane to practice, play matches, and compete in national tournaments. There are a total of 69 high school and adult teams in Vientiane.

There are 12 sports federations for the disabled, of which four sports (para-athletics, blind soccer, boccia, and flying disc) use the facilities of this project. In the para-athletics, there are athletes competing in the Paralympic Games, and in addition to training and strengthening training for these athletes, a well-equipped stadium with barrier-free facilities is necessary for the development of para-athletes. There are approximately 80,000 visually impaired people in Laos. Since soccer is a very popular sport in Laos, blind soccer and goalball are also popular sports for people with disabilities. In addition, flying disc is a sport that can be easily started by people with disabilities, and therefore, it is necessary to improve the stadiums with barrier-free facilities in order to promote these sports for the disabled.

2) Contribution to Achievement of the Goals of the Country's Medium- and Long-term Development Plan

As mentioned in the Development Plan, the development of sports in Lao PDR is included in the priority activities to achieve Outcome 2 of the Ninth National Socio-Economic Development Plan (2021-25) of Lao PDR: “Improve the quality of education at all levels and the conditions of access to education that support regional and international integration and preparation for the fourth industrial age.” Specific activities include: encouraging physical activity for health among the population; promoting traditional Lao sports; developing professional athletes, coaches, and referees who meet regional standards; and improving, utilizing, and managing athletic facilities efficiently and effectively for all levels of competition. Furthermore, the Five-Year Plan for the Education and Sports Sector (2021-2025) states that “the education and sports sector in Lao PDR will contribute to and benefit from socio-economic development by creating opportunities for equitable access to quality education and sports for all Lao citizens, and will be appropriately structured, managed, and allocated resources so that by 2025 Lao PDR will graduate from Least Developed Country status and progress toward achieving SDG-4.” The sector's overarching goal is to “ensure that the Lao people are healthy in mind and body, that sports professionals, amateur and professional athletes contribute to improving the quality of sports, and that the Lao people are proud of their sporting achievements, and contribute to the improvement of their status in the international arena that gives pride to the Lao people.” And the intermediate outcome is that Lao athletes, officials, coaches, referees, sports scientists, and sports for the disabled will be at the international level. In addition, the Lao government considers elite sports as one of the most important areas for physical and mental human resource development, strengthening solidarity, friendship, and cooperation with friendly countries in the region and the world, contributing to national defense and nation building, and bringing pride and prestige to the country. One of the priority goals of the project is the provision of sports equipment and sports materials. The development of a stadium that conforms to international standards and meets universal design under this project is necessary to achieve the above goals and will contribute to achieving the objectives of Laos’ medium- and long-term development plan.

(2) Consistency with Japan's Aid Policy

Japan has been supporting the promotion of sports in developing countries since 1975 through the Cultural Grant Aid, and has provided cultural and sport-related facilities and necessary equipment to developing countries.

At the International Olympic Committee (IOC) General Assembly in September 2013, Japan, as the host country of the Tokyo Olympic and Paralympic Games held in the summer of 2021, announced "Sport for Tomorrow (SFT)," a measure to contribute internationally through sports to spread the value of sports and the Olympic movement. Since January 2014, in order to promote SFT, Japan has been actively providing support on sports through ODA. As a result, the goal of 10 million people in 100 countries was achieved in 2019, and the program ended in 2021.

In its policy of country-specific development cooperation with Lao PDR, Japan has set "Graduating from the LDC index" in the development of economic and social infrastructure as the overall goal, and Japan is providing assistance of building a society that is in harmony with the environment and culture for the priority areas of "Bridging the Gap through Balanced Urban and Rural Development that Considers Environmental and Cultural Preservation".

This project will contribute to the promotion of social inclusion and human security for people with disabilities, women, and others through the improvement of access to sports in the country by providing hard infrastructure (facilities and equipment) to develop the National Stadium, located in the center of the capital and with convenient access, as a stadium that complies with universal design.

In addition, the project will lead to support for the social advancement of all people, including those with disabilities, through sports, and will contribute to the improvement of the level of sports in Laos, such as success in the Olympics and international competitions. Thus, this project will contribute to strengthening the autonomous economic and social infrastructure of Laos.

3-4-2 Effectiveness

The target values expected from implementation of the Project are shown below.

(1) Quantitative Effects

Since the interim results of Education and Sports Sector Development Plan 2021-2025 include an increase in the number of people playing sports and sports for people with disabilities, the quantitative effects of the project will be 1) the number of all sports competitions and games held at the Chao Anouvong Stadium per year, and 2) the number of sports competitions and games for people with disabilities held there per year. In addition, in order to measure the frequency of use of the facilities developed by the Project, 3) the total annual number of users of the Chao Anouvong Stadium, including not only sports competitions and games, but also events and citizen's exercise activities, etc., will be set.

The quantitative effects of this Project are shown in the table below

Table 3-1 Quantitative Effects

Indicator		Baseline (2019)	Target (2029) (3 years after completion)
1	No. of tournaments and matches held at Chao Anouvong Stadium (excluding events, including sports for people with disabilities)	34 times/year	53 times/year
2	No. of sports tournaments and matches held for people with disabilities at Chao Anouvong Stadium	1 time/year	27 times/year
3	No. of people using the stadium (athletes and audiences participating in the tournaments and matches, participants of events, citizens regularly using the stadium)	100,000 persons	140,000 persons

Source: Study Team

Regarding Indicator 1 and 2, due to the pandemic of COVID-19, there have been no tournaments or matches held between 2020 and 2022, and Chao Anouvong Stadium is hardly used, so the number of tournaments and matches in 2019 will be applied as reference values. The usage results of Chao Anouvong Stadium in 2019 are shown in the table below.

Table 3-2 No. of Matches, Tournaments and Events Held at Chao Anouvong Stadium in 2019

Game	Host	No. of Matches/ Tournaments, Events (2019)
Athletics		
Annual Athletics competition	Lao Athletics Federation	1
Para-Athletics		
Annual Para-Athletics competition	Lao Para Athletics Federation	1
Soccer		
AFF Suzuki Cup qualifying round	ASEAN Football Federation	1
Football Lao League 2	Lao Football Federation	8
Vientiane Capital Annual Football competition	Vientiane Capital Football Federation	4
Vientiane Capital Secondary School Football competition	Vientiane Capital Education and Sport Services	18
Rugby		
International Vientiane Rugby 10s Tournament	Lao Rugby Federation	1
Total		34
Event		
Lao Army's Day Celebration	MOES	1
Lao Trade Union Day Celebration	MOES Trade Union	1
International Women's Day Celebration	MOES Women's Union	1
Lao People's Revolution Youth Organization Day Celebration	MOES Youth Organization	1
International Labor Day Celebration	MOES Trade Union	1
International Children's and National Arbor Day Celebration	MOES	1
Lao Women's Union Day Celebration	MOES Women's Union	1
International Day of Yoga	Embassy of India and MOES	1
Lao Sports Day Celebration	MOES	1
National Teacher's Day Celebration	MOES	1
Lao Against Drugs Day Celebration	MOES	1
Lao PDR National Day Celebration	MOES	1
Total		12
Overall		46

Source: MOES

The target values after three years of service shall be the utilization plan by the MOES as shown in the table below.

Table 3-3 No. of Games, Competitions, and Events Planned to be Held at Chao Anouvong Stadium in 2029

Events	No. of Matches/ Tournaments, Events (2029)
Athletics	3
Soccer	20
Rugby	3
Total	26
Para-Athletics	8
Para-Soccer	17
Universal Sports	2
Total	27
Annual Events	12
Training	4
Private Events	12
Total	28
Grand Total	81

Source: MOES

Regarding Indicator 3, according to interviews with the Ministry of Education and Sports, the number of users of Chao Anouvong Stadium in 2019 was approximately 100,000 when the number of participants in games, competitions, and events listed in Table-iv and the number of citizens using the stadium for jogging and other activities are added. The estimated number of users after three years of service will be approximately 140,000, when the number of participants and audiences in the usage plan shown in Table 2-3 is multiplied by the number of events held per year.

(2) Qualitative Effects

- ① Improvement of safety, convenience, and hygiene in the use of facilities and equipment.
- ② The quality of para-athletics activities will be improved.
- ③ Opportunities for persons with disabilities to participate in society will be expanded.
- ④ The living environment of citizens in terms of culture and health will be improved.

Appendices

Appendices

- 1. Member List of the Study Team**
- 2. Survey Schedule**
- 3. List of Parties Concerned in the Recipient Country**
- 4. Minutes of Discussions**
- 5. Soft Component (Technical Assistance) Plan**
- 6. Other Relevant Data**
- 7. References**

1. Member List of the Study Team

1st survey From 26 November,2021 to 14 January, 2022

Position	Name	Period	Organization
		Include quarantin	
1. Leader	Mr. Koji OSHIKIRI	20 Dec 2021~ 6 Jan 2022	Senior Representative JICA Laos Office
2. Program Coordinator	Mr. Norifumi TOMITA	20 Dec 2021~ 6 Jan 2022	Project Formulation Advisor JICA Laos Office
3. Chief Consultant /Architectural Planning/ Universal Design	Mr. Mikihiro MATSUYAMA	26 Nov 2021~ 6 Jan 2022	Azusa Sekkei Co., Ltd.
4. Vice Chief Consultant /Construction and Procurement Planning /Cost Estimation	Mr. Tetsuya SUZUKI	26 Nov 2021~ 14 Jan 2022	Azusa Sekkei Co., Ltd.
5. Utilities Planning /Structural Body Survey	Mr. Takeshiro KIRIYA	26 Nov 2021~ 6 Jan 2022	Kokusai Kogyo Co., Ltd
6. Equipment Planning /Cost Estimation	Mr. Tomohiro TAMAKI	7 Dec 2021~ 6 Jan 2022	INTEM Consulting, Inc.
7. O&M Planning/Gender Sports for the Person with disabled	Ms. Atsuko NONOGUCHI	26 Nov 2021~ 31 Dec 2021	Kokusai Kogyo Co., Ltd

2nd survey From 16 July to 30 July, 2023

Position	Name	Period	Organization
1. Chief Consultant /Architectural Planning/ Universal Design	Mr. Mikihiro MATSUYAMA	16 Jul 2023~ 26 Jul 2023	Azusa Sekkei Co., Ltd.
2. Equipment Planning /Cost Estimation	Mr. Tomohiro TAMAKI	23 Jul 2023~ 30 Jul 2023	INTEM Consulting, Inc.

3rd survey : Explanation of the Draft Report From 11 September to 15 September, 2023

Position	Name	Period	Organization
1. Leader	Mr. Noriyuki ITO	12 Sep 2023~ 14 Sep 2023	Senior Representative JICA Laos Office
2. Program Coordinator	Mr. Kotaro FURUKAWA	12 Sep 2023~ 14 Sep 2023	Project Formulation Advisor JICA Laos Office
3. Chief Consultant /Architectural Planning/ Universal Design	Mr. Mikihiro MATSUYAMA	11 Sep 2023~ 15 Sep 2023	Azusa Sekkei Co., Ltd.

2. Survey Schedule

The survey schedule is attached on the following page.

2-1 1st survey

JICA Member		Chief Consultant /Architectural Planning/Universal Design	Vice Chief Consultant /Construction and Procurement Planning /Cost Estimation	Utilities Planning /Structural Body Survey	Equipment Planning /Cost Estimation	O&M Planning/Gender Sports for the Person with disabled
1	11/26 Fri	Mikihiro Matsuyama	Tetsuya Suzuki	Takeshiro Kiriya	Tomohiro Tamaki	Atsuko Nonoguchi
2	11/27 Sat	NRT→ICN ICN→VTE	NRT→ICN ICN→VTE	NRT→ICN ICN→VTE	Quarantine	NRT→ICN ICN→VTE
3	11/28 Sun	Waiting	Waiting	Waiting	Quarantine	Waiting
4	11/29 Mon	Explanation of IC/R Method and Schedule of Survey	Explanation of IC/R Method and Schedule of Survey	Explanation of IC/R Method and Schedule of Survey	MOES	Explanation of IC/R Method and Schedule of Survey
5	11/30 Tue	Waiting	Waiting	Waiting		Waiting
6	12/1 Wed	Waiting	Waiting	Waiting		Waiting
7	12/2 Thu	Waiting	Waiting	Waiting		Waiting
8	12/3 Fri	Discussion and Confirmation about answer of questionnaire	Discussion and Confirmation about answer of questionnaire	Discussion and Confirmation about answer of questionnaire		Discussion and Confirmation about answer of questionnaire
9	12/4 Sat	Waiting	Waiting	Waiting		Survey on Gender Considerations
10	12/5 Sun	Waiting	Waiting	Waiting	<Arrive at 29-Oct on other project >	Waiting
11	12/6 Mon	Discussion with JICA Lao PDR Confirmation of requirements and consideration of renovation plans	Discussion with JICA Lao PDR Appointment coordination, logistical coordination	Consideration for existing structural body	Discussion with JICA Lao PDR Confirmation of Questionnaire	Survey on Sports for Persons with Disabilities
12	12/7 Tue	Confirmation of Reuest, Renovation Planning	Construction/ Procurement Planning	Consideration for existing structural body	Equipment Planning Kick-off Discussion Survey for existing equipment	Survey on Sports for Persons with Disabilities
13	12/8 Wed	Discussion and Confirmation about answer of questionnaire	Discussion and Confirmation about answer of questionnaire	Discussion and Confirmation about answer of questionnaire	MOES (Web)	MOES (Web)
14	12/9 Thu	Confirmation of requirements and consideration of renovation plans	Construction/ Procurement Planning	Consideration of important points related to utilities for the renovation plan	MOES	Consideration of needs, validity, beneficial effects, etc.
15	12/10 Fri	Confirmation of requirements and consideration of renovation plans	Construction/ Procurement Planning	Consideration of important points related to utilities for the renovation plan	MOES	Consideration of needs, validity, beneficial effects, etc.
16	12/11 Sat	Waiting	Waiting	Waiting	Questionnaire answer analysis	Waiting
17	12/12 Sun	Discussion among survey team Document study	Discussion among survey team Document study	Discussion among survey team Document study	Discussion among survey team Document study	Discussion among survey team Document study

M/D: Minutes of Discussions, MOES: Ministry of Education and Sports, JICA: JICA Laos Office, EOJ: Embassy of Japan

	JICA Member	Chief Consultant /Architectural Planning/Universal Design		Vice Chief Consultant /Construction and Procurement Planning /Cost Estimation		Utilities Planning /Structural Body Survey		Equipment Planning /Cost Estimation		O&M Planning/Gender Sports for the Person with disabled	
		Mikihiko Matsuyama	Tetsuya Suzuki	Takehiro Kiriya	Tomohiro Tamaki	Atsuko Nonoguchi	MOES Project Site	MOES Project Site	MOES Project Site	MOES Project Site	MOES Project Site
18	12/13	Mon	Discussion of the priority of project component, Needs, Malfunction, future plan Existing facility survey	MOES Project Site	Discussion of the priority of project component, Needs, Malfunction, future plan Existing facility survey	MOES Project Site	Discussion of the priority of project component, Needs, Malfunction, future plan Existing facility survey	MOES Project Site	Discussion of the priority of project component, Needs, Malfunction, future plan Existing facility survey	MOES Project Site	MOES Project Site
19	12/14	Tue	Confirmation and discussion for needs of the stadium Visit of New National Stadium	NOC, NPC New National Stadium	Confirmation and discussion for needs of the stadium Visit of New National Stadium	NOC, NPC New National Stadium	Survey for existing structural body (Visual inspection and sound inspection)	Confirmation and discussion for needs of the stadium Visit of New National Stadium	NOC, NPC New National Stadium	Confirmation and discussion for needs of the stadium Visit of New National Stadium	NOC, NPC New National Stadium
20	12/15	Wed	Discussion of the priority of project component, Needs, Malfunction, future plan	MOES	Confirmation for answer of Questionnaire	MOES	Survey for existing structural body (Visual inspection and sound inspection)	Discussion of the priority of project component, Needs, Malfunction, future plan	MOES	Survey on Gender Sports Situation Survey	MOES
21	12/16	Thu	Discussion of the priority of project component, plan	MOES	Discussion of the priority of project component, plan Confirmation of building regulation	MOES MPWT	Survey for existing structural body (Visual inspection and sound inspection)	Discussion about the Equipments	MOES	Confirmation of operation and maintenance management plan for sports for the person with disabled	MOES Organization of Persons with Disabilities
22	12/17	Fri	Document study Consideration of Plan	—	Confirmation of lawn procurement situation	Turf Contractor	Survey for existing structural body (Visual inspection and sound inspection)	Discussion about the Equipments	MOES	Survey for sports for the person with disabled	MOES NPC
23	12/18	Sat	Discussion among survey team Document study	—	Discussion among survey team Document study	—	Summary of survey for existing structural body (Preparation of preliminary survey report)	Discussion among survey team Document study	—	Discussion among survey team Making interview record	—
24	12/19	Sun	Discussion among survey team Document study	—	Discussion among survey team Document study	—	Summary of survey for existing structural body (Preparation of preliminary survey report)	Discussion among survey team Document study	—	Discussion among survey team Making interview record	—
25	12/20	Mon	Report and discussion about project decision with JICA	JICA (Web)	Report and discussion about project decision with JICA	JICA (Web)	Report and discussion about project decision with JICA Interview with contractor	Report and discussion about project decision with JICA Confirmation of specification of equipment	JICA (Web)	Report and discussion about project decision with JICA	JICA (Web)
26	12/21	Tue	Consideration of Facility Plan	—	Document study Consideration of construction plans	—	Survey for existing utilities Preparation of preliminary survey report	Procurement Situation Survey Confirmation of equipment specifications	Distributors MOES	Survey on Gender Sports for sports for the person with disabled	Local Gender Experts (Web) Para athlete
27	12/22	Wed	Discussion about facility plan Report and discussion about project decision with JICA	MOES JICA (Web)	Discussion about facility plan Report and discussion about project decision with JICA	MOES JICA (Web)	Preparation of preliminary survey report Report and discussion about project decision with JICA	Confirmation of equipment specifications	MOES	Discussion about facility plan Report and discussion about project decision with JICA	MOES JICA (Web)
28	12/23	Thu	Consideration of the facility plan Drafting of Minute Proposals	—	Interview about construction situation Site survey	Constructors MOES, Project site	Analysis of Utility Survey Results Consideration of the utility plan (water supply, drainage, sanitary equipment)	Consideration of equipment planning	—	Survey on Gender Sports for sports for the person with disabled	LDWDC Para athlete
29	12/24	Fri	Consideration of the facility plan Drafting of Minute Proposals	—	Document study Consideration of construction plans	—	Analysis of Utility Survey Results Consideration of the utility plan (water supply, drainage, sanitary equipment)	Procurement Situation Survey	Distributors	Survey for sports for the person with disabled	Para athlete
30	12/25	Sat	Consideration of the facility plan/Consideration for the decision for renovation or reconstruction	—	Document study Consideration of construction plans	—	Examination of the main points of renovation of facilities in construction	Meeting with a sports doctor	—	Making interview record	—
31	12/26	Sun	Document study Consideration of facility plans	—	Document study Consideration of construction plans	—	Examination of the main points of renovation of facilities in construction	Document study Consideration of equipment planning	—	Making interview record	—
32	12/27	Mon	Discussion of M/D with MOES	MOES	Attending to JICA Member Survey for construction situation	MOES Local consultant	Attending to JICA Member Examination of the main points of renovation of facilities in construction	Attending to JICA Member	MOES	Attending to JICA Member	MOES
33	12/28	Tue	Discussion of M/D with MOES, Courtesy visit to Minister of MOES	MOES	Attending to JICA Member	MOES	Visit to the Electric Power Bureau (Electrical Equipment) Attending to JICA Member Confirmation of on-site power receiving equipment	Attending to JICA Member	MOES	Attending to JICA Member	MOES

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	JICA Member	Chief Consultant /Architectural Planning/Universal Design		Vice Chief Consultant /Construction and Procurement Planning /Cost Estimation		Utilities Planning /Structural Body Survey		Equipment Planning /Cost Estimation		O&M Planning/Gender Sports for the Person with disabled	
		Mikihito Matsuyama	—	Tetsuya Suzuki	Contractors MOPWT EIA Consultant	Takehiro Kiriya	Water Bureau Fire Dept MoNRE	Tomohiro Tamaki	Atsuko Nonoguchi	—	MOES (Web)
34	12/29 Wed	Consideration of the facility plan Amendment of Minute draft.	—	Construction Situation Survey Building Standards Confirmation EIA Application Confirmation	Contractors MOPWT EIA Consultant	Visit to the Water Bureau Visit to the Fire Department Visit to the MoNRE	Water Bureau Fire Dept MoNRE	Procurement Situation Survey	Market	Drafting a report	MOES (Web)
35	12/30 Thu	Consideration of the facility plan Amendment of M/D Site Supplementary Survey	Project site	Construction Situation Survey Confirmation of Geo and Topo survey Site Supplementary Survey	Contractors Project site	Examination of power receiving equipment. Power Bureau Revisited	Power Bureau	Procurement Situation Survey Site Supplementary Survey	Distributors Project site	PCR test VTE→ICN→	—
36	12/31 Fri	Consultation on M/D Discussion of Components	MOES	Consultation on M/D Discussion of Components	MOES	Consultation on M/D Discussion of Components	MOES	Consultation on M/D Discussion of Components	MOES	—NRT	—
37	1/1 Sat	Document study Discussion among survey team	—	Document study Discussion among survey team	—	Document study Discussion among survey team	—	Document study Discussion among survey team	—	—	—
38	1/2 Sun	Document study Discussion among survey team	—	Document study Discussion among survey team	—	Document study Discussion among survey team	—	Document study Discussion among survey team	—	—	—
39	1/3 Mon	Document study Discussion among survey team	—	Confirmation of Geo and Topo survey	Contractors Project site	Document study Discussion among survey team	—	Document study Discussion among survey team	—	—	—
40	1/4 Tue	Report to JICA Report to EOJ	JICA(Web) EOJ(Web)	Report to JICA Report to EOJ	JICA(Web) EOJ(Web)	Report to JICA Report to EOJ	JICA(Web) EOJ(Web)	Report to JICA Report to EOJ	JICA(Web) EOJ(Web)	Report to JICA Report to EOJ	JICA(Web) EOJ(Web)
41	1/5 Wed	PCR test Document study VTE→ICN→	—	Listen to unit price quotes Market research EIA Application Confirmation	Contractors EIA Consultant	PCR test VTE→ICN→	—	PCR test VTE→ICN→	—	—	—
42	1/6 Thu	—NRT	—	Listen to unit price quotes Market research	Contractors	—NRT	—	—NRT	—	—	—
43	1/7 Fri			EIA Application Confirmation Confirmation of Geo and Topo survey	EIA Consultant Contractor						
44	1/8 Sat			Document study	—						
45	1/9 Sun			Document study	—						
46	1/10 Mon			Document study Confirmation of Geo and Topo survey	Contractor						
47	1/11 Tue			EIA Application Confirmation Construction Situation Survey	MoNRE Contractors						
48	1/12 Wed			Confirmation of M/D Construction situation survey	MOES Contractors						
49	1/13 Thu			PCR test Unit price quotation listening and logistic payment VTE→ICN→	translator . etc.						
50	1/14 Fri			—NRT	—						

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2-2 2nd survey

			Chief Consultant /Architectural Planning / Universal Design	Equipment Planning/Cost Estimation		
			Mikihiro Matsuyama	Tomohiro Tamaki		
1	7/16	Sun	HND → BKK → VTE	—		
2	7/17	Mon	Courtesy call to JICA Explanation of Draft Final Report Explanation of Draft Technical Note	MOES		
3	7/18	Tue	Explanation of Draft Final Report	MOES		
4	7/19	Wed	Chao Anouvong Stadium Survey	Stadium		
5	7/20	Thu	Explanation of Draft Final Report	MOES		
6	7/21	Fri	Explanation of Draft Final Report	MOES		
7	7/22	Sat	Document Study	—		
8	7/23	Sun	Document Study	—	HND → BKK → VTE	—
9	7/24	Mon	Explanation of Draft Final Report	MOES	Same as on the left	MOES
10	7/25	Tue	Signing Technical Note Report to JICA and Japanese Embassy VTE → BKK →	MOES JICA EOJ	Same as on the left	MOES JICA EOJ
11	7/26	Wed	→NRT	—	Confirmation of specification of equipment	MOES
12	7/27	Thu			Confirmation of specification of equipment	MOES
13	7/28	Fri			Confirmation of specification of equipment	MOES
14	7/29	Sat			VTE → BKK →	—
15	7/30	Sun			→NRT	—

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2-3 3rd survey: Explanation of the Draft Report

			Leader		Program Coordinator		Chief Consultant /Architectural Planning / Universal Design	
			Noriyuki Ito		Kotaro Furukawa		Mikihiro Matsuyama	
1	9/11	Mon					HND → BKK → VTE	—
2	9/12	Tue	Discussion on Operation and Maintenance and M/D	MOES	same as on the left	MOES	same as on the left	MOES
3	9/13	Wed	Discussion on Operation and Maintenance and M/D	MOES	same as on the left	MOES	same as on the left	MOES
4	9/14	Thu	Signing M/D Report to JICA and Japanese Embassy	MOES JICA EOJ	same as on the left	MOES JICA EOJ	same as on the left	MOES JICA EOJ
5	9/15	Fri					VTE → BKK	—

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3. List of Parties Concerned in the Recipient Country

Parties	Position	Name
Ministry of Education and Sports		
Permanent Secretary Office	Permanent Secretary / Director of the Project	Mme. Daravone Kittiphanh
	Deputy Director General	Mr. Phommaseng Thiphavong
	Technical Staff	Mr. Vilasack chittanousone
Permanent Secretary Office, Research and Executive Briefing Division	Technical Staff / Coordinator of the Project	Ms. Latdavanh Phommakhot
Permanent Secretary Office, Finance Division	Head of Division	Ms. Viengkhone Chanthanouvong
	Technical Staff	Ms. Vilavanh Phommasouk
Permanent Secretary Office, Administration Division	Deputy Head of Division	Mr. Sysavanh Keovongsy
Permanent Secretary Office, Assets Management Division	Head of Division	Mr. Phoukham Manoloth
	Deputy Head of Division	Mr. Bounmany Phommasane
Permanent Secretary Office, Division for the Advancement of Women and Children	Deputy Head of Division	Mr. Bounmixay Sommay
Department of Finance	Deputy Director General	Mr. Khambay Sorsiliphon
Department of Planning	Deputy Director General	Mr. Anoupheng Keovongsa
Department of Planning, Planning Division	Head of Division	Ms. Bouavanh Chanthanongdeth
Department of International Cooperation	Deputy Director General	Mr. Sisamout Saneboutthalad
Department of Planning, Project Management Division	Deputy Head of Division	Mr. Souksamone Saphouvong
Department of International Cooperation, Bilateral Cooperation Division	Technical Staff	Ms. Phoukhieng Pankeo
	Technical Staff	Mr. Panith Phanavanh
Department of Sports for all, Physical and Art education.	Deputy Director General	Mr. Khamphet Phetlasy
Department of Sports for all, Physical and Art education, Para Sports Division	Head of Division	Mr. Thongsavath Vongsavang
Department of Sports for all, Physical and Art education, Inspection, monitor and evaluation Division	Technical Staff	Mr. Vannaseng Soulintha
Department of Sports for all, Physical and Art education, Para Sports Division	Deputy Head of Division	Mr. Sivixay Sengdavong
Department of Sports for all, Physical and Art Education, Physical and Art Education Division	Deputy Head of Division	Mr. Khonesavanh Phasalermsouk
Department of Sports for all, Physical and Art Education, Sports for all Division	Deputy Head of Division	Mr. Viengxay Theungbandith
Department of Elite Sports	Deputy Director General / Member of the Committee for the Advancement of Women and Child	Ms. Phouxay PhengPhong
	Deputy Director General	Mr. Chanthavong Panyasak
Department of Elite Sports, Sports Development Division	Deputy Head of Division	Ms. Teo Phoukeo

Parties	Position	Name
Department of Elite Sports, Administration Division	Deputy Head of Division	Ms. Deuanpheng Somphone
Department of Elite Sports, Sports Competition Division	Deputy Head of Division	Ms. Phetsamay Phalasy
Department of Elite Sports, Inspection, monitor and evaluation Division	Deputy Head of Division	Mr. Bounyaseng Naxiengkham
National Stadium KM16		
National Stadium KM16	Director General	Mr. Velmany Vilavong
National Stadium KM16, Technical Section	Deputy Head of section	Mr. Somephone Sonevongxay
National Stadium KM16, Administration Section	Acting Head of section	Mr. Soukthavy Khammang
National Olympic Committee of Laos		
National Olympic Committee of Laos	President	Assoc. Prof. Dr. Phout Simmalavong
National Olympic Committee of Laos, Sports Coordination Division	Head of Division	Mr. Vanhseng Phengsouvanh
	Deputy Head of Division	Ms. Alounny Lernvilay
National Paralympic Committee of Laos		
National Paralympic Committee of Laos	President	Ms. Khanthaly Siriphongphanh
	Deputy President / Secretary General	Mr. Vilavanh Bounsoukthay
National University of Laos		
National University of Laos Faculty of Engineering	Head of Division	Assoc. Prof. Dr. Khamphaseuth Thepvongsa
National University of Laos Faculty of Architecture	Deputy Head of Division	Dr. Thanousone Vongpraseuth
Sports federation		
Institute of Sports	Director General	Mr. Soulivanh Sernvilay
	Deputy Director General	Mr. Kingsakda Thongsamout
Laos National Football Federation	Person in charge of maintaining the field of New National Stadium	Mr. Phonephaseuth
Para-Sports Federation		
Para-Athletics Federation	National Representative 100m & 200m Sprint	Mr. Ken Thepthida
Para-Powerlifting Federation	–	Ms. Dengmany SibounHeung
	National Representative of Para-Powerlifting	Ms. Latsamy Sipasert
–	National Representative of Goal Ball	Mr. Tong Khongkham
Doctor		
–	Neurologist	Dr. Appasone Phoumin
Other relevant organizations		
Ministry of Public Works and Transport (MPWT) Urban Planning and Environment Division	Deputy Head (Project Manager)	Mr. Korlakanh SENEBOUTTALATH
Ministry of Public Works and Transport (MPWT) Department of Public Works and Transport for Vientiane Capital/ Division of Housing and Urban Planning	Officer(Technical)	Mr. Thinnakone Pimmavong

Parties	Position	Name
ELECTRIC DU LAOS Vientiane Capital-1Branch Distribution System Department	Deputy Manager	Mr. Vassana PHELAMPANH
	System Controller	Mr. Souksakhone Nunthavong
NAMPARA NAKHONELUNG	Deputy Manager of Technical section	Mr. Souphet BOUPHAXAY
Fire Office	Director	Lt. Col. Chittasone PHANTHAVONG
Ministry of Natural Resources and Environment Department of Environment	Deputy Director	Mr. Phoumisith Vongvansay
Ministry of Natural Resources and Environment Soil and Water Pollution Control Division, Pollution Control Department	Deputy Director	Mr. Sengkeo TASAKETH
Vientiane City Office Management Services Division	Chief of Division	Mr. Panya Manivons
NGO		
Lao Disabled People's Association (LDPA)	Director	Mr. Samnien Thammavong
Lao Disabled Women's Development Center (LDWDC)	Program Coordinator / Training Instructor	Ms. Chmchai Phianam
ADDP	Coordinator for NPC	Ms. Pakham Chanvisommid
	In-Charge-Of Para-Badminton Federation	Mr. Thavone Silo
	In-Charge-Of Para-Powerlifting Federation	Ms. Kee Chanthaphone Sanou
	In-Charge-Of Para-Swimming Federation	Ms. Sisomboun Vongsihalath
	In-Charge-Of Para-Swimming Federation	Mr. Vorlachit
	Coach for National Blind Football Team	Mr. Sython
	External Advisor	Dr. Appasone Phoumindr
Gender Experts (Freelance)		
–	Local Gender Expert	Ms. Souknida Sautouky
–	Local Gender Expert	Ms. Boutsady Khounnouvong

4. Minutes of Discussions

4-1 Minutes of Discussions on 1st survey

The Minutes of Discussions on 1st survey is attached on the following page.

Minutes of Discussions
on the Preparatory Survey for the Project for
Rehabilitation of Chao Anouvong Stadium

In response to the request from the Government of the Lao People's Democratic Republic (hereinafter referred to as "Lao PDR"), Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") of the Project for Rehabilitation of Chao Anouvong Stadium (hereinafter referred to as "the Project") to Lao PDR. The Team held a series of discussions with the officials of the Government of Lao PDR and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Vientiane, February 15, 2022




Mr. Koji OSHIKIRI
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan


Dr. Daravone KITTIPHANH
Chief of the Cabinet Office/ Permanent Secretary
Ministry of Education and Sports
Lao People's Democratic Republic

ATTACHMENT

1. Objective of the Project

The objective of the Project is to rehabilitate the function and safety of the facilities of the Chao Anouvong Stadium (hereinafter referred to as “the Stadium”) in Vientiane Capital and to promote the use of athletes and wide range of citizens by/through rehabilitating the stadium facilities and procuring the equipment, thereby contributing to the promotion of social participation of the people with disabilities, the promotion of sports, cultural activities and the development of city environment in the Lao PDR.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Rehabilitation of Chao Anouvong Stadium”.

3. Project site

Both sides confirmed that the site of the Project is in Chao Anouvong Stadium, which is shown in Annex 1.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

The Ministry of Education and Sports will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts are shown in Annex 2.

5. Items requested by the Government of the Lao PDR

5-1. As a result of discussions, both sides confirmed that the items requested by the Government of the Lao PDR are as follows:

(a) The final requested facilities are described in Annex 3 with priorities.

(b) The final requested equipment is described in Annex 4 with priorities.

5-2. JICA will assess the feasibility of the above requested items through the survey and will report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Lao PDR side agreed that the procedures and basic principles and basic principles of Japanese Grant (hereinafter referred to as “the Grant”) as described in Annex 5 shall be applied to the Project.

As for the monitoring of the implementation of the Project, JICA requires Lao PDR side to submit the Project Monitoring Report, the form of which is attached as Annex 6.

6-2. The Lao PDR side agreed to take the necessary measures, as described in Annex 7, for smooth implementation of the Project. The contents of the Annex 7 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report.

The contents of Annex 7 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Survey

7-1. The Team will proceed with further survey in the Lao PDR until 13th January 2022.

7-2. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to the Lao PDR in order to explain its contents around September 2022.

7-3. If the content of the draft Preparatory Survey Report is accepted and the undertakings for the Project are fully agreed by the Lao PDR side, JICA will finalize the Preparatory Survey Report and send it to the Lao PDR around December 2022.

7-4. The above schedule is tentative and subject to change.

8. Environmental and Social Considerations

8-1. The Lao PDR side confirmed to give due environmental and social considerations before and during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).

8-2. The Project is categorized as “C” from the following considerations:

Not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

The Lao PDR side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental and Social Impact Assessment (ESIA) / Environmental and Social Management and

Monitoring Plan (ESMMP) and information disclosure, etc.) and make ESIA/ESMMP report of the Project. The costs related to the environmental assessment shall be borne solely by the Lao PDR side. The procurement of EIA consultant including making TOR shall be conducted by Lao PDR side. The ESIA approval shall be received from the responsible authorities and submitted to JICA by 2 months before the tender date. The ESMMP approval shall be received from the responsible authorities and submitted to JICA in a timely manner after operation the Stadium.

9. Technical Assistance (“Soft Component” of the Project)

Both sides confirmed necessity of the technical assistance on the operation and maintenance of the Stadium. The detail of the technical assistance including the maintenance of lawn of football pitch shall be further examined through the survey.

10. Other Relevant Issues

10-1 Main demarcation between the Stadium and the New National Stadium

Both sides confirmed the main demarcation of the Stadium and the New National Stadium as below.

Chao Anouvong Stadium:

- International regional sport events for ASEAN, Mekong Regional Level both Para and Non-Para
- National sport events both Para and Non-Para
- Training of Elite Athlete, Para Athlete, Referee and Coach
- Practice both Para and Non-Para
- National events
- Public use

New National Stadium:

- International sport events both Para and Non-Para
- International regional sport events for Asia, ASEAN, Mekong Regional Level both Para and Non-Para
- Professional events, training and practice

10-2 Certifications of the Stadium

Both sides confirmed that the stadium will be designed to be suited to national sport events, training, practice, national events, and public use. Hence, fulfillment of requirements for certifications or complete / perfect requirements of manuals, guidelines, regulations, laws of World Athletics (WA), International Federation of Association Football (FIFA), World Rugby (WR), etc. are not required for the Stadium.

10-3 Athletic track and fields

Both sides confirmed that the athletic track and field will be designed in accordance with

the construction category III or IV of Track and Field Facilities Manual 2019 edition of World Athletics. The category shall be further examined through the survey.

10-4 Football and Rugby pitch

Both sides confirmed that the football and rugby pitch will be designed in accordance with the guidelines of FIFA and WR.

Both sides also confirmed that it is difficult to completely / perfectly fulfill international guidelines due to limitation of the size of the existing site and budget.

The items on which the rehabilitation plan may not meet the international guidelines include (but are not limited to) the following:

- (a) Warm-up facilities
- (b) Ancillary rooms; and,
- (c) Facilities for media and press

A chart comparing the rehabilitation plan and the international guidelines is shown in Annex 8 for the sole purpose of reference.

10-5 Spectator stand

Both sides confirmed that the spectator stands will be constructed at main side and/or back side only due to the setback law and to save the sport field. The capacity of spectator stands shall be further examined through the survey.

10-6 Renovation or Reconstruction

Both sides confirmed that it was necessary to demolish and reconstruct the existing stadium due to the heavy deterioration and unsafe nature of the structure according to the site survey by the Team. The Lao PDR requested the Team to reconstruct the Stadium and bear the demolition cost of the existing stadium by the Grant. The building design shall be further examined through the survey, taking into account the culture of Laos, ways to symbolize the friendship between Japan and Laos, and other factors.

10-7 Gender Mainstreaming

Both sides confirmed that following gender elements shall be duly reflected in the scope of Preparatory Survey.

- (a) Collection of information on gender-related issues including the level of participation of women in sports.
- (b) Examination of gender-responsive measures based on the assessment, such as:
 - ✓ Facility design and selection of equipment that reflects gender-specific needs from a user's perspective including those related to safety and usability.
 - ✓ Construction plan that includes necessary measures to address gender-related issues such as ensuring equal pay between genders and adequate working environment for women workers, among others.
 - ✓ Other gender-related measures including securing greater roles for women in the management of relevant organizations and establishing a new budget item for conducting activities towards gender equality (e.g., promotion of women's participation in sports and leadership training for women).

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10-8 Permission

Building permit, disposal of demolition waste and ESIA / ESMMP are required. All necessary permission for the Project shall be obtained by the Executing Agency.

The main procedures of the permissions are shown in Annex 9.

10-9 Operation and Maintenance Cost

The operation and maintenance cost for the Stadium shall be secured by the Executing Agency. The amount of operation and maintenance cost shall be further examined through the survey.

10-10 Operation and Maintenance Personnel

The operation and maintenance personnel for the Stadium shall be secured by the Executing Agency. The necessary personnel for operation and maintenance shall be further examined through the survey.

10-11 Publicity on the Cultural Grant Aid

The following activities will be carried out in recognition of the valuable contribution made by the people and government of Japan to the cultural development of Laos.

(a) To hold a handover ceremony

(b) To conduct a public recognition through website, brochure, social media and press release by the Lao PDR.

10-12 Major Undertakings to be taken by the Lao PDR

The Lao PDR side agreed to secure the budget and conduct the major undertakings to be taken by recipient government in Annex 7 in a timely manner.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 The final requested facilities

Annex 4 The final requested equipment

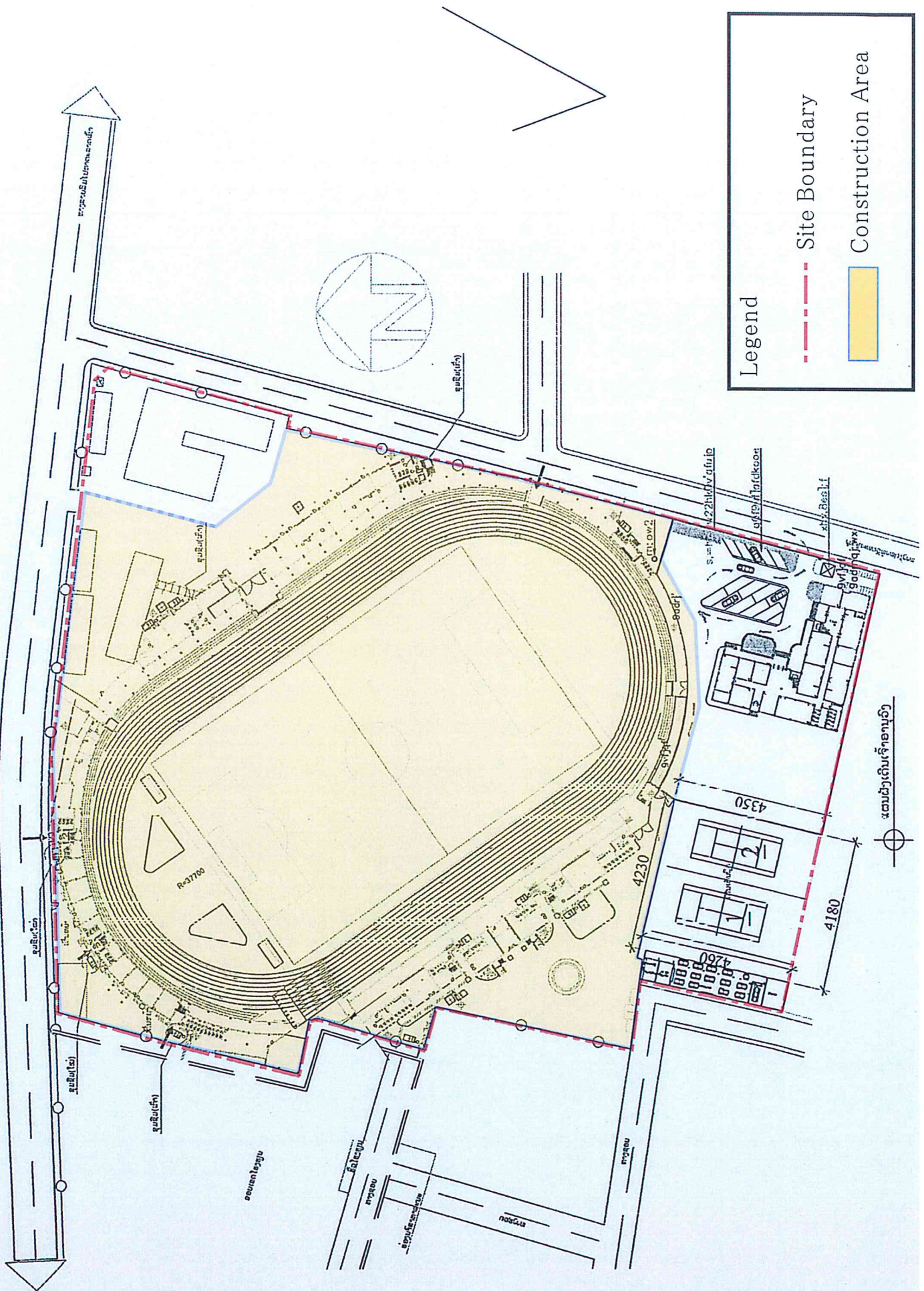
Annex 5 Japanese Grant

Annex 6 Project Monitoring Report (template)

Annex 7 Major Undertakings to be taken by the Government of Lao PDR

Annex 8 Comparison of the rehabilitation plan and the international guidelines

Annex 9 Main procedures of permissions



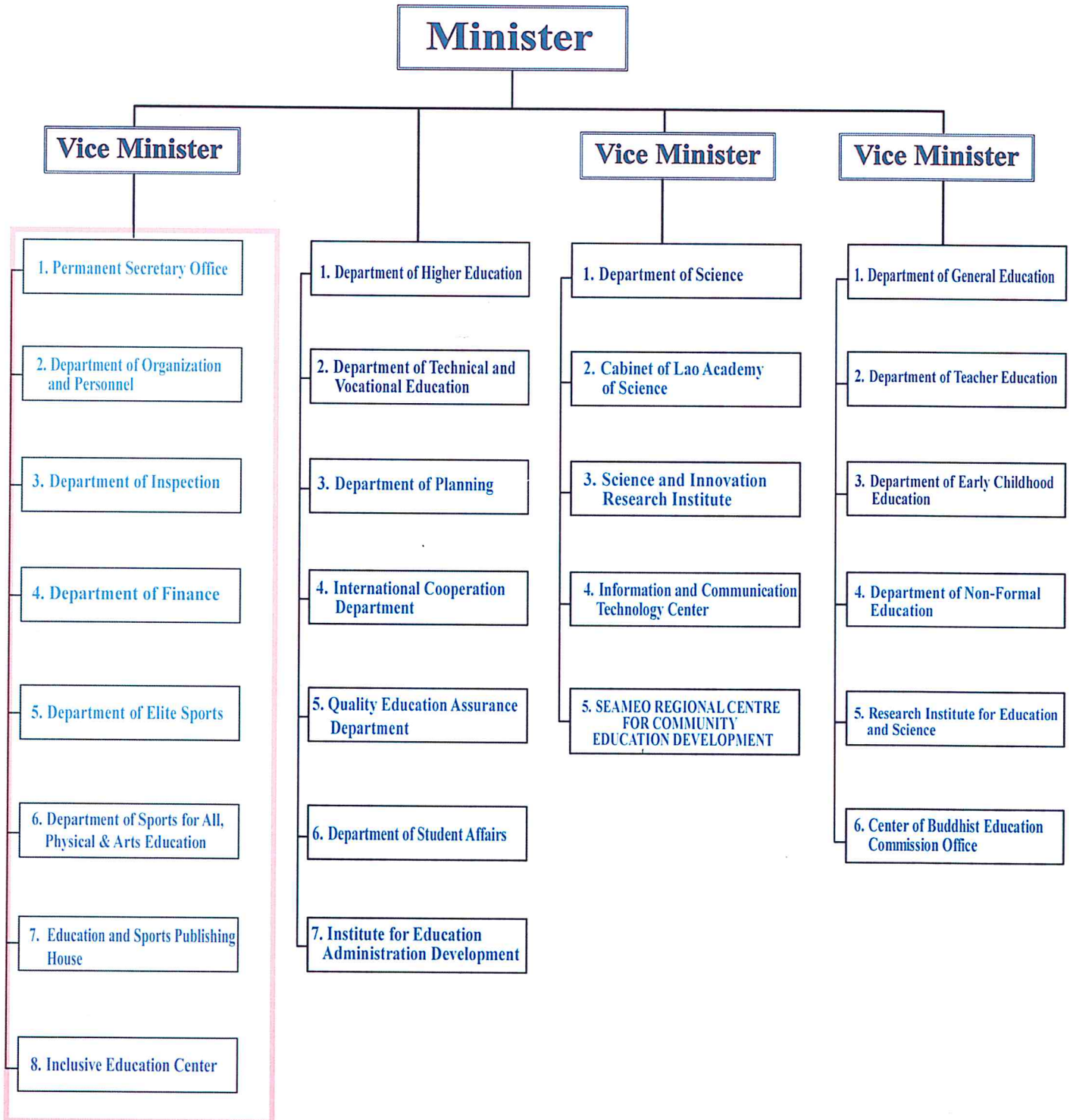
Legend

- Site Boundary
- Construction Area

DA



Organization of Ministry of Education and Sports



THE FINAL REQUESTED FACILITIES

Items	Plan	Number	Priority	Remarks
Track	400m standard oval track	More than 6 lanes	A	All weather running track (IAAF certified material)
	Straight lanes for 100m and 110m Hurdles		A	
	Steeplechase	1	A	
Field	Water jump	1	A	
	Long and Triple jump	2	A	
	High jump	2	A	
	Pole vault	2	A	
Throwing	Discus and Hammer Throw	1	A	
	Javelin Throw	1	A	
	Shot Put	2	A	
Football pitch	105mx68m	1	A	FIFA size Natural grass including drainage system of the ground
Rugby field	94mx68m	1	B	World rugby standard minimum size
Spectator seats	3000~4000 seats	-	A	
Ancillary Rooms	VIP room	1	A	
	Changing room	4	A	Unisex
	Toilet (M, F, U)	-	A	Adequate number
	Fitness room	1	A	
	Medical science room	1	A	Including Massage space
	Emergency and Doping room	1	B	
	Media room	1	B	
	Office	1	A	For 5 permanent staffs
	Meeting room/ Event organizer room	1	A	For 10 persons
	Referee room	1	A	
	Ball boy room	1	B	
	Security office	1	A	
	Dormitory (M, F)	2	B	For para athletes intensive training 15 males 10 females
	Storage	2	A	For track and field equipment and tools. For Lawnmower and maintenance equipment.
	Café space	1	B	
Shop space	1	B		
Fire cauldron		1	B	
LED Scoreboard		1	A	
Car parks	Handicap parking lots	-	A	
	Parking lots	-	B	

Priority A: First B: Second

M: Male, F: Female, U: Universal

THE FINAL REQUESTED EQUIPMENT

No.	Code No.	Name of equipment	Q'ty	P'ty
1	OS-01	Computer	2	B
2	RH-01	Electrical muscle stimulation	1	A
3	RH-02	Ultrasound therapy machine	1	A
4	RH-03	High low plinth	2	A
5	RH-04	Physical therapy bed	1	A
6	RH-05	Parallel bar	1	A
7	RH-06	Chair	6	A
8	RH-07	Partition	1	A
9	RH-08	Balance trainer	1	A
10	RH-09	Upper body ergometer	2	A
11	RH-10	Mirror	1	A
12	RH-11	Goniometer set	1	A
13	EC-01	Elliptical trainer	1	A
14	EC-02	Stair-stepper	1	A
15	EC-03	Stationary bicycle	1	A
16	EC-04	Treadmill	1	A
17	EC-05	Ankle weight	2	A
18	EC-06	Accessible training bench	1	A
19	EC-07	Dumbbell set	1	A
20	EC-08	Barbell set	1	A
21	EC-09	Kettlebell set	1	A
22	EC-10	Pull-up frame and bar	1	A
23	EC-11	Fitness ball	1	A
24	EC-12	Foam roller	3	A
25	EC-13	Rehabilitation pole	1	A
26	EC-14	Multi-station exercise machine	1	A
27	EC-15	Cable crossover	1	A
28	EC-16	Leg adduction/abduction machine	1	A
29	EC-17	Pilates reformer	1	B
30	GR-01	Rubber gym tile	3	A
31	GR-02	Ice machine	1	A
32	GR-03	Mirror	1	A

No.	Code No.	Name of equipment	Q'ty	P'ty
33	BG-01	Side fence for blind football	1	A
34	BG-02	Goal and net set for blind football	1	A
35	BG-03	Ball for blind football	10	A
36	BG-04	Ball basket	2	A
37	BG-05	Goal and net set for football	1	A
38	BG-06	Flag pole	1	A
39	BG-07	Coach bench for football	1	B
40	BG-08	Rugby goal set	1	B
41	AT-01	Hurdle fences	1	A
42	AT-02	Steeplechase fences	1	A
43	AT-03	Starting blocks for competition	12	A
44	AT-04	Starting blocks for exercise	18	A
45	AT-05	Equipment for running commands	1	B
46	AT-06	Color cards set	2	A
47	AT-07	Flag set	20	A
48	AT-08	Track number	1	A
49	AT-09	Relay baton for competition	3	A
50	AT-10	Relay baton for training	5	A
51	AT-11	Stopwatch	15	A
52	AT-12	Photo finish camera kit	1	B
53	AT-13	Starter stand	2	A
54	AT-14	Bell	1	A
55	AT-15	Lap count indicator	1	A
56	AF-01	Tape measure	2	A
57	AF-02	Take off board	4	A
58	AF-03	Throwing distance indicator	2	A
59	AF-04	Rake	4	A
60	AF-05	Protect cover for sandpit	2	A
61	AF-06	Pole vault equipment	1	B
62	AF-07	High Jump equipment	2	A
63	AF-08	Stop board	1	A
64	AF-09	Throwing platform	4	A
65	AF-10	Throwing protection net set	2	A

No.	Code No.	Name of equipment	Q'ty	P'ty
66	AF-11	Javelin set	2	A
67	AF-12	Cart for javelin	1	A
68	AF-13	Plate set	1	A
69	AF-14	Cart for plate	1	A
70	AF-15	Ball set for shot put	1	A
71	AF-16	Cart for shot put ball	1	A
72	AF-17	Hammer	1	A
73	AF-18	Cart for hammer	1	A
74	AF-19	Roll tape	10	A
75	OM-01	Lawn tractor	1	A
76	OM-02	Lawn roller	1	B
77	OM-03	Maintenance tool set	1	B
78	FA-01	Bed	2	A
79	FA-02	Wheelchair	2	A
80	FA-03	Stretcher	2	A

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as “the Recipient”) to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as “Project Grants”).

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See “PROCEDURES OF JAPANESE GRANT” for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as “the Survey”) conducted by JICA

(2) Appraisal

-Appraisal by the government of Japan (hereinafter referred to as “GOJ”) and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as “the G/A”)

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as “the B/A”)

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as “the Bank”) to receive the grant

Construction works/procurement

-Implementation of the project (hereinafter referred to as “the Project”) on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

-Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as “the E/N”) will be signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the “General Terms and Conditions for Japanese Grant (January 2016).”

2) Banking Arrangements (B/A) (See “Financial Flow of Japanese Grant (A/P Type)” for details)

- a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
- b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA’s procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project’s implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the “Meeting”) will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

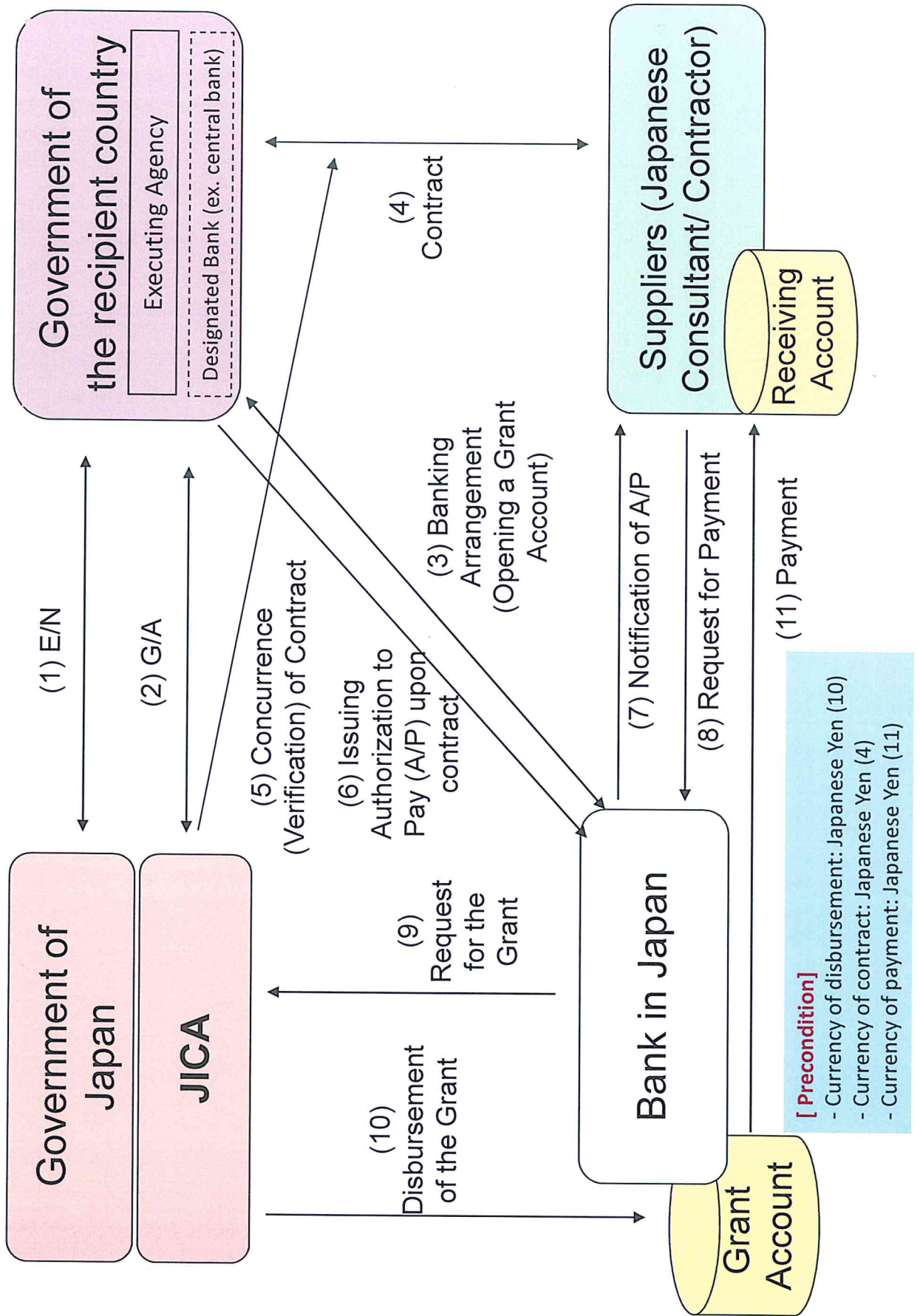
PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
(14) Completion certificate		x			x	x		
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

Financial Flow of Japanese Grant (A/P Type)



Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX
20XX, Month

Organizational Information

Signer of the G/A (Recipient)	<p>_____ Person in Charge (Designation)</p> <p>Contacts _____ Address: Phone/FAX: Email:</p>
Executing Agency	<p>_____ Person in Charge (Designation)</p> <p>Contacts _____ Address: Phone/FAX: Email:</p>
Line Ministry	<p>_____ Person in Charge (Designation)</p> <p>Contacts _____ Address: Phone/FAX: Email:</p>

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

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1: Project Description	
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1-1 Project Objective

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

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2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

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2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
	1.			
Total				

Note: 1) Date of estimation:

2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
	1.			

- Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original (at the time of outline design)

name:

role:

financial situation:

institutional and organizational arrangement (organogram):

human resources (number and ability of staff):

Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)

Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)

Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

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	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

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5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

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5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
 - Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final) only)
8. Pictures (by JPEG style by CD-R) (PMR (final) only)
9. Equipment List (PMR (final) only)
10. Drawing (PMR (final) only)
11. Report on RD (After project)

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

Items of Specified Materials		Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment Price (Decreased) E=C-D	Condition of payment Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

Items of Specified Materials		1st month, 2015	2nd month, 2015	3rd month, 2015	4th	5th	6th
1	Item 1	●	●	●			
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
 (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction	(A/D%)	(B/D%)	(C/D%)	
Cost others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

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Major Undertakings to be taken by Recipient Government

1. Before the Tender

NO	Items	Deadline	In charge	Cost (KIP)	Ref.
1	To coordinate with the National Bank of Lao PDR to open Bank Account (Banking Arrangement (B/A))	Immediately after G/A	MoES MoF BoL	N/A	Jan. 2023
2	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 2 weeks after the signing of the agreement	MoES MoF BoL	N/A	Feb. 2023
3	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		-	-	-
	Advising commission of A/P	within 2 weeks after the signing of the agreement	MoES MoF BoL	600,000	Feb. 2023
	Payment commission for A/P	At the payment upon certification of consultant agreement	MoES MoF BoL	7,500,000	Feb. 2023
4	To create and apply Environmental and Social Impact Assessment (ESIA) Report and Environmental and Social Management and Monitoring Plan (ESMMP)	12 months before the tender date	MoES	Under investigation	Aug. 2023
5	To approve ESIA Report / ESMMP	2 months before the tender date	MoES	Under investigation	Aug. 2023
6	To secure the following lands Project construction site including building area and temporary construction yard and stockyard within Chao Anouvong Stadium	Before E/N	MoES	N/A	Oct. 2022
7	To secure the move or the temporary rooms of following rooms; 1) Medical science room 2) Fitness gym 3) Offices 4) Equipment warehouse 5) Dormitory 6) Canteen, Shops	Before the construction contract	MoES	N/A	Nov. 2023
8	To obtain the building permit and other necessary permissions	1 month before the tender date	MoES	Under investigation	Aug. 2023

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2. During the Project Implementation

NO	Items	Deadline	In charge	Cost	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the contractor and supplier(s)	within 2 weeks after the signing of the contract(s)	MoES MoF BoL	N/A	Oct. 2023
2	To bear the following commissions to a bank of Japan for the banking services based upon the B/A	-	-	-	-
	1) Advising commission of A/P	within 2 weeks after the signing of the contract(s)	MoES MoF BoL	1,200,000	Oct. 2023
	2) Payment commission for A/P	At the payment upon certification of Contract	MoES MoF BoL	540,000,000	Oct. 2023
		At the payment upon value of works achieves 50% of Facility Construction	MoES MoF BoL	36,000,000	Aug. 2024

		At the payment upon value of works achieves 50% of Facility Construction	MoES MoF BoL	27,000,000	Sep. 2024
		At the payment upon the handover of equipment	MoES MoF BoL	11,000,000	Nov. 2024
		At the payment upon completion of Facility Construction	MoES MoF BoL	13,500,000	Nov. 2024
		At the payment upon completion of Technical Assistance	MoES MoF BoL	400,000	Dec. 2024
3	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country	during the Project	MoES	N/A	As appropriate
	1) Facilitate tax exemption and customs clearance of the products at the port of disembarkation	during the Project	MoES MPI MoF	N/A	As appropriate
4	To accord Japanese physical persons and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	MoES MPI	N/A	As appropriate
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted; Such customs duties, internal taxes and other fiscal levies mentioned above include VAT, commercial tax, income tax and corporate tax of Japanese nationals, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract	during the Project	MoES MPI MoF	N/A	As appropriate
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	MoES	N/A	As appropriate
7	To submit Project Monitoring Report.	every quarter and when necessary	MoES	N/A	As appropriate
*Followings shall be examined further through the study:					
8	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities	-	-	-	-
	1) Electricity				
	The distributing line to the site	3 months before completion of the construction	MoES	Under investigation	Aug. 2024
	2) Water Supply				
	The city water distribution main to the site, if necessary	3 months before completion of the construction	MoES	Under investigation	Aug. 2024
	3) Drainage				
	The city drainage main (for storm, sewer and others) to the site, if necessary	3 months before completion of the construction	MoES	Under investigation	Aug. 2024
	4) Telephone System				
	The telephone trunk line and internet line to the main distribution frame/panel (MDF) of the new constructed facility, if necessary.	3 months before completion of the construction	MoES	Under investigation	Aug. 2024
	5) Gas Supply (if any)				
	The city gas main to the site, if necessary.	3 months before	MoES	Under	Aug. 2024

		completion of the construction		investigation	
6) Furniture and Equipment					
	Transferring and Purchasing general furniture for facilities.	1 month after completion of the construction	MoES	Under investigation	Aug. 2024
9	To implement and monitoring of ESMMP	during the construction	MoES	Under investigation	Aug. 2024
	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	MoES	N/A	As appropriate
	To implement Resettlement Action Plan (RAP) (livelihood restoration program, if needed)	for a period based on livelihood restoration program	MoES	N/A	As appropriate
	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report - Period of the monitoring may be extended if affected persons' livelihoods are not sufficiently restored. Extension of the monitoring will be decided based on agreement between MoES and JICA.	- until the end of livelihood restoration program (In case that livelihood restoration program is provided) - for two years after land acquisition and resettlement complete (In case that livelihood restoration program is not provided)	MoES	N/A	As appropriate

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3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of sufficient budget for operation and maintenance 2) Operation and maintenance structure 3) Routine check/Periodic inspection 4) Contracting with agents for maintenance of specialized equipment and lift (If necessary) 5) Regular collection and proper disposals of wastewater	After completion of the construction	MoES	Under investigation	As appropriate
2	To implement ESMMP, if necessary	for a period based on ESSMP	MoES	Under investigation	As appropriate
3	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between MoES and JICA.	for three years after the Project	MoES	N/A	As appropriate

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*Deadline, person in charge and cost shall be further examined through the study.

Major Undertakings to be Covered by the Japanese Grant

No	Items	Deadline	Cost Estimated (Million Japanese Yen)*	Ref.
1	To construct facility			
	- Rehabilitation of Chao Anouvong Stadium			
	1) To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country			
	a) Marine(Air) transportation of the products from Japan to the recipient country			
	b) Internal transportation from the port of disembarkation to the project site			
	2) To construct access roads			
	a) Within the site			
	3) To construct the temporary building			
	4) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities			
	a) Electricity			
	The drop wiring and internal wiring within the site/ the facility to be renovated			
	The main circuit breaker and transformer			
	b) Water Supply			
	The supply system within the site/ the facility to be renovated (receiving and/or elevated tanks)			
	c) Drainage			
	The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site/ the facility to be renovated			
	d) Furniture and Equipment			
Project equipment				
2	To procure equipment			
3	To implement detailed design, tender support, construction and procurement supervision and soft component (Consultant)			
4	Contingencies			
	Total			

*; Items shall be further examined through the survey.

*; Deadline and the cost estimates shall be further examined through the survey.

*; This is subject to the approval of the Government of Japan.

Comparison of the rehabilitation plan and the international guidelines

Category	Rehabilitation plan		Regulations				fulfill	Remarks	
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA			WR
Athletic	Track								
	400m	Oval Standard	More than 6 lanes	-	Oval Standard or Double Bend 6 lanes	-	-	Yes	WA Competition Categories 7
	100m and 110m Hurdles	-	More than 6 lanes	-	6 lanes	-	-	Yes	Construction Categories IV
	Steeplechase	-	1	-	1	-	-	Yes	
	Direction	NW/SE less than 22.5°	-	-	NW/SE less than 22.5°	-	-	Yes	
	Surface	all-weather running track	-	-	all-weather running track	-	-	Yes	
	Drainage Field	-	Yes	-	Required	-	-	Yes	
	Water jump	-	1	-	NA	-	-	Yes	
	Long and Triple Jump	-	2	-	2	-	-	Yes	
	High Jump	-	2	-	2	-	-	Yes	
	Pole Vault	-	2	-	2	-	-	Yes	
	Throwing								
	Discus and Hammer Throw	-	1	-	1	-	-	Yes	
	Javelin Throw	-	1	-	1	-	-	Yes	
	Shot Put	-	2	-	2	-	-	Yes	
	Ancillary facilities								
	Warm-up Facilities	-	No	-	-	Adjacent park or playing field	-	No	
Ancillary rooms	-	*	-	-	200m2	-	No		
Spectators	-	Yes	-	-	Required	-	Yes		

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec./Area (m2)	Number	IPC	WA	FIFA	WR		
Football	Surface	Natural grass	-	Wood or Synthetic rubber or Natural grass or Artificial grass	-	Natural grass or certified artificial turf	-	Yes	
	Drainage	-	Yes	-	-	Required	-	Yes	
	Pitch	105m x 68m	1	40m x 20m	-	105m x 68m	-	Yes	
	Grass area	109m x 74m	-	-	-	115m x 78m	-	No	
	Overall Playing Field area	170m x 102m	-	-	-	125m x 85m	-	Yes	Including athletic area
Rugby	Surface	Natural grass	-	-	-	-	Grass or Sand or Clay or Snow or Certified artificial turf	Yes	
	Field of play	94m x 68m	1	-	-	-	94~100m x 68~70m	Yes	
	Playing area	106m x 68m	-	-	-	-	106~144m x 68~70m	Yes	
	Playing enclosure	116m x 78m	-	-	-	-	116~154m x 78~80m	Yes	Including athletic area
Spectators	Seating	3000 ~4000 seats	-	-	Minimum "C" value 60mm	Minimum "C" value 60mm/ Minimum width 50cm VIP and VIP: minimum width 60cm	-	Yes	

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Distinguished Guests	* seats	-	-	20~25 seats	-	-	*	
	VIP Seating/ Sponsors, Seating	* seats	-	-	200 seats	Required	-	*	
	Toilet (for Male, Female and Universal)	-	4	-	-	Recommended minimum number of toilets and sinks is 28 and 14 respectively for every 1,000 women and 3 toilets, 15 urinals and 6 sinks for every 1,000 men.	-	*	
	Café space	*	1	-	-	-	-	-	
	Shop space	*	1	-	-	-	-	-	
Rooms for Sport									
Ancillary Rooms									
	Foyer	*m2	1	-	15m2 per 30 users and Reception room 10~15m2 and Toilet (M, F)	Utility/refre shment area (minimum 25m2)	-	Yes	

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/Area (m2)	Number	IPC	WA	FIFA	WR		
	Changing room	*m2	4	-	75m2 (24 lockers) 100m2 (36 lockers) 145m2 (48 lockers) 195m2 (72 lockers)	At least 2 rooms Preferably 4 rooms (80m2, at least 25 people)	-	Yes	
	Massage area	*m2	4	-	1 area/room (2.40m x 1.80m)	40m2 (3 massage tables)	-	Yes	
	Showers/Toilets	*m2	4	-	1 area/2 changing rooms	50m2 (11 showers, 5 washbasins, 3 urinals, 3 toilets)	-	Yes	
	Room for coaches	*m2	2 (Male and Female)	-	2 rooms (20m2)	30m2 (1 shower, 4 lockers, toilet)	-	Yes	
	Call Room	-	No	-	80m2 (1.2m2 per athlete)		-	No	
	Room for Victory Ceremony Preparation	-	No	-	30~45m2		-	No	
	Weight Training Room/Fitness gym	*m2	1	-	24~240m2		-	Yes	
	Sauna/Relaxation Area	-	No	-	60m2		-	No	

Category	Rehabilitation plan			Regulations				fulfill	Remarks	
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR			
	Dormitory (Male)	*m2	1	-	-	-	-	-	For para athletes intensive training 15 males	
	Dormitory (Female)	*m2	1	-	-	-	-	-	For para athletes intensive training 10 females	
Rooms for Officials										
	Judges	*m2	2 (Male and Female)	-	2.50m2 each for 30 or less judges. 2m2 for more than 30 judges each and 1m2 each for over 50 judges. with shower and toilet	-	-	-	Yes	
	Referees	*m2	2 (Male and Female)	-	1 room (20m2 with shower and toilet)	24~45m2 (lockers for 4 people, a massage table, 2 showers, 1 washbasin, 1 urinal, 1 toilet)	-	-	Yes	
	Meeting room	*m2	*	-	An adequate room	-	-	-	*	
	First Aid Room	-	No	-	1 room (at least 15m2 with toilet)	-	-	-	No	

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Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/Area (m2)	Number	IPC	WA	FIFA	WR		
	Station for Medical Services	*m2	1	-	Waiting room (10~15m2), consultation and examination room (15m2), treatment room (15m2) and toilets	50m2 (an examination table, 2 portable stretchers, a treatment table)	-	Yes	Including first aid and doping control
	Doping Control Rooms	-	Included in Station for Medical Services	-	Waiting Room (15 athletes, 2m2/person) Working Room (18m2) Toilets (2 cubicles, 4.5m2)	Minimum 36m2 (toilet, working room and waiting room)	-	No	
	Medical science Room	*m2	1	-	-	-	-	-	Including Massage space
	Ball kids' Room	*m2	2 (for Boys and Girls)	-	-	Minimum 40m2 (for each sex). (2 toilets, 2 washbasins, 2 showers)	-	Yes	
Rooms and Space for Distinguished Guests, VIPs and Sponsors									
	VIP room	*m2	*	-	-	-	-	-	
	Hospitality Facilities	-	No	-	important	-	-	No	
Other Areas									
	Athletics Equipment Room	*m2	1	-	required	-	-	Yes	
	Display Areas	-	*	-	in the main entrance	-	-	No	
	Franchises	-	*	-	to sell food, drink, merchandising	-	-	No	

Category	Rehabilitation plan			Regulations				Fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Advertising Boards	-	*	-	Refer to IAAF Advertising Regulations	-	-	No	
Rooms for the Media									
Media Centre									
	Entrance Hall	-	No	-	as required	-	-	No	
	Reception Area	-	No	-	as required	Required	-	No	
	Administration Secretariat, Press Office	-	No	-	Director 20m2 Other members of staff 12m2/person Secretariat 12m2 Temporary press office 20m2	-	-	No	
	Room for Press Conferences	*m2	1	-	400 seated persons	Required	-	*	
	Catering Facilities	-	No	-	as required	Required	-	No	
	Lounge Area	-	No	-	1m2 of equipment space for every 2 persons	-	-	No	
	Cloak Room	-	No	-	if required	-	-	No	
	Toilets	-	No	-	as required	-	-	No	
	Store for Cleaning Equipment	-	No	-	as required	-	-	No	
	IT and T desk	-	No	-	-	Required	-	No	
	Copy and fax service	-	No	-	-	Required	-	No	
	Pigeonholes	-	No	-	-	Required	-	No	
	Host city information desk	-	No	-	-	Required	-	No	
	Press								

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Main Stand Seating	*seats	-	-	National competition (50 seats with desk, 30 seats)/ Regional (300 seats with desk, 100 seats)/ International (800~900 seats with desk, 200~300 seats)	-	-	*	
	Main Press Centre (MPC)	-	No	-	World Championships / Olympics (Working places for 500~650 journalists)	Media working areas Photographers , working areas offices for media management	-	No	
	Working Area within the Stadium	-	No	-	Unless the MPC is located within the stadium	-	-	No	
	Formal Interview Room	-	No	-	National events (50~70 persons), Regional events (100~150 persons) International events (200~300 persons)	Press conference room: Minimum 200m2, Approximately 100 seats	-	No	
	Results Preparation and Delivery	-	No	-	-	-	-	No	

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Camera Repair Service	-	No	-	-	Required	-	No	
	Lockers	-	No	-	National (30~40), Regional (125~150) World / Olympic (250~300)	Required	-	No	
	Press Agencies	-	No	-	-	-	-	No	
	Ticket distribution desks	-	No	-	-	2 (one for photographers, one for print journalists)	-	No	
	Mixed zone	-	No	-	-	Room for approximately 250 media personnel	-	No	
	Flash interview position	-	No	-	-	for live interviews immediately after the match or interviews with coaches at the beginning or the end of the half-time interval	-	No	
	Television and Radio								

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Commentary Positions	-	No	-	National (5~6), Regional (20~30), International (80~100), World Championships and Olympic Games (150).	-	-	No	
	International Broadcast Centre (IBC)	-	No	-	-	-	-	No	
	Outside Broadcast (OB) Vans Compound	-	No	-	National competition (2~3 vans, 800m2) Major regional/international competition (10~12 vans, 1500m2) World Championships (20~25 vans, 3000m2).	4,000~6,000m2 for a major final	-	No	
	Television studios	-	No	-	-	3 television studios for major matches, approximately 25m2 and a minimum 3meter height	-	No	

Category	Rehabilitation plan		Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Presentation studios	-	No	-	-	1 studio with a panoramic view over the pitch for major international events	-	No
Operational Rooms and Rooms for Competition Organization								
Rooms for Operation and Technical Installations								
	Box for competition director	-	No	-	4 x 3m	-	-	No
	Box for event presentation manager	-	No	-	4 x 5m	minimum 20m2 (1 toilet, 1 washbasin)	-	No
	Box for stadium announcers	-	No	-	4 x 3m	-	-	No
	Box for scoreboard operator	-	No	-	2 x 3m	-	-	No
	Box for security/ police	-	No	-	4 x 3m	-	-	No
	Box for monitor surveillance	-	No	-	as required	-	-	No
	Box for public address system	-	No	-	2 x 2m	-	-	No
	Box for lighting control	-	No	-	2 x 2m	-	-	No
	Box for timing /photo finish evaluation	-	No	-	3 x 5m	-	-	No
	Toilets	-	No	-	as required	-	-	No
	Store for cleaning equipment	-	No	-	as required	-	-	No
	Stewards and Public Order Services							

Category	Rehabilitation plan		Regulations				fulfill	Remarks	
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA			WR
	Assembly and lounge for police, fire brigade and stewards	-	No	-	1m2 per person	-	-	No	
	Toilets	-	No	-	as required	-	-	No	
	Security cells	*m2	1	-	as required	-	-	Yes	
Rooms for Organizers / Sports Federations									
	International president' s office	-	No	-	24m2	-	-	No	
	International secretary general' s office	-	No	-	18m2	-	-	No	
	National president' s office	-	No	-	24m2	-	-	No	
	National secretary general' s office	-	No	-	18m2	-	-	No	
	Competition secretariat	-	No	-	as required	-	-	No	
	Computer room	-	No	-	30~35m2	-	-	No	
	Technical information centre	-	No	-	as required	-	-	No	
	Rooms for statisticians	-	No	-	as required	-	-	No	
	Conference room (among others for the Jury of Appeal and for video monitoring)	-	No	-	20~30m2	-	-	No	

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Small kitchen	-	No	-	minimum 8m2	-	-	No	
	Toilets	-	No	-	as required	-	-	No	
Rooms for Administration and Maintenance									
Administration									
	Reception Area	-	No	-	-	-	-	No	
Offices									
	Director	-	No	-	20m2	-	-	No	
	Secretariat	-	No	-	12m2	-	-	No	
	Other members of staff	*	1	-	12m2/person	-	-	Yes	For 5 permanent staffs
	Accounts dept. / entrance tickets administration	-	No	-	12m2	-	-	No	
	PR and marketing	-	No	-	12m2	-	-	No	
	Competition organization	-	No	-	12m2	-	-	No	
Conference Area									
	Conference room	*m2	1	-	20~30m2	-	-	Yes	For 10 persons
	Small kitchen	-	No	-	as required	-	-	No	
	Toilets	*m2	3 (Male, Female, Universal)	-	as required	-	-	Yes	
	Store for cleaning equipment	*m2	1	-	as required	-	-	Yes	
Maintenance									

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Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Office for Maintenance Manager	-	No	-	15~20m2	-	-	No	
	Offices for the Technicians								
	Room for building maintenance	*m2	1	-	10m2	-	-	Yes	
	Room for heating, ventilation, sanitary engineers	-	No	-	10m2	-	-	No	
	Room for electrical engineers	-	No	-	10m2	-	-	No	
	Room for ground staff	-	No	-	10m2	-	-	No	
	Personnel Rooms								
	Changing and sanitary room	-	No	-	as required	-	-	No	
	Lounge with small kitchen	-	No	-	min. 8m2 or 1.20m2/person	-	-	No	
	Store room and Workshops								
	Sports Equipment Room	*m2	1	-	1m2 of equipment space for every 500m2 to 700m2 of usable sports area	-	-	Yes	
	Maintenance and Cleaning Room	*m2	1	-	1m2 of equipment space for every 400m2 to 500m2 of usable sports area	-	-	Yes	

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Room for Fertilizers, Cleaning Agents and Spare Parts	*m2	1	-	as required	-	-	Yes	
	Storeroom for Electrical Equipment	-	No	-	as required	-	-	No	
	Workshop	*m2	1	-	minimum 15m2	-	-	Yes	
	Garage for Tractor	*m2	1	-	15m2	-	-	Yes	
	Garage for Small Pick-up Vans, Lorries	-	No	-	15~20m2	-	-	No	
	Fuel Store	-	No	-	as required	-	-	No	
	Plant Rooms								
	Heat Plant	-	No	-	-	-	-	No	
	Refrigeration Plant	-	No	-	-	-	-	No	
	Ventilation Plant System	-	No	-	-	-	-	No	
	Transformers and Power Distributors	*m2	*	-	-	-	-	*	
	Fire Fighting Water Network and Water Reservoir	*m2	*	-	-	-	-	*	
	Mains Room	-	No	-	as required	-	-	No	

Category	Rehabilitation plan			Regulations			fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Waste Disposal Area							
	Waste Disposal Area	*	*	-	as required	-	*	
	Lighting and Power							
	Lighting Criteria							
Technical Services	Horizontal Illuminance (Eh)	-	-	-	Non-Televised Events Eh ave. (lux) 500	Eh ave. (lux) National games non-televised 750 National televised 2,500 International televised 3,500	-	Yes Non-Televised
	Vertical Illuminance towards Cameras (Ev) ave. (Lux)	-	-	-	World Championships and Olympic Games Slow motion camera 1800 Mobile camera 1000 Photo Finish camera 2000	International televised 1,800 field camera National televised 1,400 field camera	-	No
	Ev towards fixed Cameras ave. (Lux)	-	-	-	National and International Competitions Fixed camera 1000 World Championships and Olympic Games Fixed camera 1400	International televised fixed camera >2,000 National televised fixed camera 2,000	-	No

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Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Ev towards Mobile and ENG Cameras	-	-	-	the uniformity (Ev min./Ev max.) between the four vertical calculations at a single grid point should not be lower than 0.3	-	-	No	
	Ratios	-	-	-	should not exceed the ratio of 0.5 to 2 times the vertical illuminance level on immediately adjacent to the competition area (around 15 first rows) should be around but not be less than 25% of that provided for the competition area	-	-	Yes	

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Category	Rehabilitation plan			Regulations			fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Planning, Measurement/ Installation commissioning	-	-	-	The planning value or replacement value of the lighting is to be calculated around at least 25% higher because of ageing and soiling of the lights	Horizontal: positioning the measuring cell 1m above the pitch at 90° , perpendicular to the pitch Fixed camera: positioning the measuring cell 1m above the pitch, 30° above the horizon Field camera: positioning the measuring cell 1m above the pitch and parallel to the pitch	-	Yes

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Illuminance Uniformity	-	-	-	National and International Competitions Fixed camera U1=0.4 U2=0.6 World Championships and Olympic Games Fixed camera U1=0.5 U2=0.7 Uniformity Gradient (UG) per 5 m < 20%	National games non- televised U2=0.7 CV<0.3-0.4 UG = 2-2.5 National games televised U1=0.6 U2=0.8 CV<0.13-0.15 UG = 1.5-2	-	Yes	Non- Televised
	Glare	-	-	-	Glare Rating (GR) < 50	GR<50	-	Yes	Non- Televised
	Colour Temperature	-	-	-	> 4000	National games non- televised Tk>4,000	-	Yes	Non- Televised
	Colour Rendering Index	-	-	-	> 80	Ra>65 for both televised and non-televised events	-	Yes	Non- Televised
Lighting Recommendations									
	Televised Events	-	-	-	necessary to provide an adequate vertical illumination towards cameras across the scene viewed by the camera	-	-	No	

Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Anti-Panic Lighting	-	-	-	maintain an illumination of at least 25 lux in the stands	-	-	*	
	Modelling and Shadows	-	-	-	the distribution of the total flux installed should be no greater than 60% for the main camera side and no less than 40% for the opposite side	-	-	*	
	Installation Recommendations								
	Permitted Longitudinal Positioning of the Floodlights	-	-	-	lighting equipment shall not be placed within a zone of 15° either side of the goal line for televised competitions and 10° for non-televised competitions	Class III National game (non-televised) Event pitch shall be illuminated with a minimum of 8 poles.		Yes	

Category	Rehabilitation plan			Regulations			Fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Pre-Determination of Tower Height	-	-	-	the angle subtended at the centre of the competition area to the head-frame centre shall be not less than 25° ($h = d \times \tan \alpha$), while ensuring that no luminaire is aimed above 70° from the downward vertical	For televised-quality lighting: The head frame and light structure may exceed 25° minimum guideline but it may not exceed 45° degrees. Luminaire tilt angles should not exceed 70° from the nadir (straight down) to the centre of the beam.	-	Yes
	Stroboscopic Effect	-	-	-	"flicker" or stroboscopic effect can be minimised by ensuring that the illumination is provided by groups of three luminaires with overlapping beams	-	-	Yes

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Category	Rehabilitation plan			Regulations				fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Power Requirement	-	-	-	If the high voltage power supply to the stadium comes from one substation, should be standby generators	an N+1 arrangement	-	*	
	Environmental impact	-	-	-	-	Horizontal spill 50m from stadium perimeter 25 lux 200m further 10 lux Maximum vertical 50m from stadium perimeter 40 lux 200m from stadium perimeter 20 lux	-	*	
Measurements									
	Timing	-	-	-	With time differences measured to the nearest 1/1000 of a second, the slit camera seemed a suitable by tachometer	-	-	No	
	Distance and Height	-	-	-	-	-	-	No	

Category	Rehabilitation plan		Regulations				fulfill	Remarks	
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA			WR
	Wind Speed	-	-	-	by mechanical means (moving propellers) or by the use of ultrasonic or mass flow technology certified as accurate by an appropriate authority	-	-	No	
	Cables	-	-	-	to connect up the timing, distance measurement and data processing equipment, permanently laid cables should be provided	-	-	*	

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Category	Rehabilitation plan		Regulations				fulfill	Remarks	
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA			WR
	Field Boards	-	-	-	including athlete's name, number, nationality, details of the performance and the current position of the athlete	-	-	No	
	Scoreboards								
	Board Types	LED	1		-Scoreboards with incandescent lamps - Electromechanical scoreboards - LCD scoreboards - LED scoreboards - Cathode ray tubes - Fluorescent tubes	-	-	Yes	

Category	Rehabilitation plan			Regulations				fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Choice of Board	-	-	-	<p>character height between 0.35m and 0.52m must be used.</p> <p>30mm pixels can be used with a minimum of 192 lines and the height of the board should be about 6m.</p> <p>the height of the board should be 3% to 5% of the maximum viewing distance.</p> <p>minimum luminance -2000 NIT for 2-tone matrix boards</p> <p>-4000 NIT for colour video matrix boards</p> <p>at least 10 lines of 32 characters are required</p>	-	-	*	
	Functions	-	-	-	All functions are controlled by the video or computer system	-	-	*	

Category	Rehabilitation plan			Regulations			fulfill	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Public Address (PA) Systems	-	-	-	frequency range of approximately 350 to 6000Hz. For transmission of music, the lower frequency band from 50 to 100Hz upwards and, the higher range up to 10kHz and beyond	-	-	Construction Category I-III standards should be equipped with public address systems
	Required Transmission Volumes	-	-	-	a useful signal of 115dB(A) to ensure the required 10dB(A) signal-to-noise gap	-	*	*

Category	Rehabilitation plan			Regulations				fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Environmental Impact of Public Address Systems	-	-	-	Some countries have set statutory maximum thresholds for facilities situated near residential areas. These specifications must be taken into account in the planning and calibration of public address systems.	-	-	Yes	
	Loudspeaker Arrangement	-	-	-	ensure that most of loudspeaker signal output reaches the spectator from the front, or at least from an overhead location.	-	-	Yes	

Category	Rehabilitation plan			Regulations				fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR		
	Suitable Loudspeaker systems	-	-	-	fully weatherproof. Prevailing background noise conditions, use of high-directivity loudspeakers with sharply focused beam characteristics which ideally should address only the spectator areas while radiating a minimum of noise to the surrounding environment	-	-	Yes	
	Amplifier Output, Operation and System Availability	-	-	-	the necessary amplifier output is essentially dependent on the size of the facility and the useful signal volume to be achieved.	-	-	*	
Television Monitoring Systems (Crowd Control)									

Category	Rehabilitation plan			Regulations				Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA	WR	
	Lighting Requirements	-	-	-	In the case of artificial lighting, it is essential that the lamp contains all the colours of natural light. For example, Halogen lamps.	-	-	*
	Lamp Types/Colour Fidelity	-	-	-	Metal Halide (HPI): Good to excellent/ Tubular Fluorescent (TL): Moderate to excellent/ Halogen Lamps: Excellent/ Incandescent Lamps: Excellent	-	-	*
	Image Processing	-	-	-	video-matrix, quad units, multiplexers and video switches	-	-	*
	Technical Installation Concept	-	-	-	it is desirable to have a complete record of all incidents from the beginning to the end of the sports event.	-	-	*
Technical Services for the Media								

Category	Rehabilitation plan			Regulations				fulfil	Remarks
	Items	Spec./Area (m2)	Number	IPC	WA	FIFA	WR		
	Communications	-	-	-	Direct sight, telephone link or ideally open radio link are essential	-	-	No	
	Press	-	-	-	Provision of Work Area of Journalists, TV Monitors, Telecommunications	-	-	No	
	Television and Radio	-	-	-	-Commentary unit -colour TV monitor -data channels -an information terminal -International Broadcast Centre (IBC)	-	-	No	
	Communications and additional areas								
	Communications rooms	-	-	-		Communications rooms should be dedicated and separate from electrical rooms.	-	No	

Category	Rehabilitation plan		Regulations				fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Telephones	-	-	-	-	The stadium must have a central telephone switchboard with a tapping facility for incoming calls.	-	*
Parking	for spectators	*parking lots	-	-	1 car parking space, (approx. 25m2) for every 4 spectator spaces or, in the case of an optimal public transport network, 25 spectator spaces and 1 bus park (approx. 50m2) for every 500 spectator spaces.	For 60,000 capacity stadium, 10,000 cars 500 buses	-	*

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Category	Rehabilitation plan			Regulations			fulfil	Remarks
	Items	Spec/ Area (m2)	Number	IPC	WA	FIFA		
	Hospitality parking	*parking lots	-	-	-	Near the VIP entrance, and separate from the public car parks, there should be sufficient parking space for the buses and cars used by VIPs.	-	*
	Parking for teams, match officials and stadium staff	*parking lots	-	-	-	at least 4 buses and 14 cars (six each for the teams and two for the match officials) should be available	-	*
	The emergency services and disabled spectators	*parking lots	-	-	-	immediately adjacent to, or inside, the stadium	-	* for police vehicles, fire engines, ambulances services and for the vehicles of disabled spectators

*: Further study is required.

IPC: IPC Accessibility Guide - 4th edition - October 2020

WA: Track and Field Facilities Manual 2019 Edition - C and Track and Field Facilities Manual 2008 Edition - C of World Athletic

FIFA: FIFA Football Stadiums Technical recommendations and requirements - 5th Edition

WR: Laws of the game Rugby Union 2022 World Rugby

Main procedures of the permissions

1. Environmental and Social Impact Assessment (ESIA)

NO	Items	Deadline	Duration	Tentative Date	In charge
1	Screening	12 months before the tender date	1 days	Oct. 2022	MoES
2	Submission of - Scoping report - Terms of Reference (TOR)	11.5 months before the tender date	1 month	Oct. 2022	MoES
3	Appraisal of - Scoping report - Terms of Reference (TOR)	10.5 months before the tender date	15 working days	Nov. 2022	MoNRE
4	Explanation to the habitant who effected by the project Correction of comments to the project from distrect, prefecture, province	9.5 months before the tender date	15 days	Nov. 2022	MoES
5	Submission of - Application form - Environmental and Social Impact Assessment (ESIA) report and - Environmental and Social Management and Monitoring Plan (ESMMP)	9 months before the tender date	3 months	Dec. 2022	MoES
6	Management review of ESIA and ESMMP	6 months before the tender date	10 days	March. 2023	MoNRE
7	Submission of 15 sets of ESIA and ESMMP	6.5 months before the tender date	5 days	March. 2023	MoES
8	Technical review of ESIA and ESMMP - Distribution to relevant organizations (by MoNER) - Review by concerned organization (by Concerned Organizations) - Public hearing in district, prefecture, province for correcting comments to the ESIA report (by MoES) - Modification and Submission of Final Environmental and Social Impact Assessment (ESIA) report (by MoES)	6.5 months before the tender date	95 working days	March. 2023	MoNRE, Concerned Organizations and MoES
9	Issuance of Environmental Compliance Certificate	2 months before the tender date	-	Aug. 2023	MoNRE
10	Implement and Monitoring of ESMMP	During the construction and after the operation, if necessary			MoES
11	Report of ESMMP	During the construction and after the operation, if necessary			MoES

MoES: Ministry of Education and Sport, MoNRE: Ministry of Natural Resources and Environment

2. Building permit

NO	Items	Deadline	Duration	Tentative Date	In charge
1	Preparation of Drawings (Architecture, Structure, Mechanical, Electrical, Plumbing)	2 months before the tender date	-	Aug. 2023	Consultant
2	Submission of - Application form - Agreement of neighbors - Request for the site survey to MoPWT - Record of the site survey by MoPWT - Land ownership certificate - Environmental Compliance Certificate - Drawings (Architecture, Structure, Mechanical, Electrical, Plumbing)	2 months before the tender date	-	Aug. 2023	MoES

MoPWT: Ministry of Public Works and Transport

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