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1. Member List of Study Team

(1) 1st Preparatory Survey (25/January/2016 - 15/March/2016)

| | | |
|-------------------------|---|--|
| Mr. Jitsuya ISHIGURO | Team Leader | Japan International Cooperation Agency |
| Mr. Tsuyoshi YAMAJUKU | Chief Consultant/Road Planner | Katahira & Engineers International |
| Mr. Kiyoshi MUKAI | Deputy Chief Consultant / Road Planner | Katahira & Engineers International |
| Mr. kazuharu KOISHIKAWA | Pavement Designer | Ingérosec Corporation. |
| Mr. Toshihiko AIZAWA | Road/Structure Designer | Yachiyo Engineering CO., LTD. |
| Mr. Tetsuo IKENAGA | Natural Condition Surveyor | Katahira & Engineers International |
| Mr. Kenji KOUDA | Traffic Survey | Katahira & Engineers International |
| Mr. Takayasu MAEHATA | Environment and Social Consideration | Katahira & Engineers International |
| Mr. Hiroshi NAKASHIMA | Cost Estimation / Construction Planing | Katahira & Engineers International |

(2) 2nd Preparatory Survey (21/July/2016 - 4/August/2016)

| | | |
|-----------------------|---|------------------------------------|
| Mr. Tsuyoshi YAMAJUKU | Chief Consultant/Road Planner | Katahira & Engineers International |
| Mr. Kiyoshi MUKAI | Deputy Chief Consultant / Road Planner | Katahira & Engineers International |
| Mr. Takayasu MAEHATA | Environment and Social Consideration | Katahira & Engineers International |

(3) Explanation of Draft Report (6/November/2016 - 20/November/2016)

| | | |
|-----------------------|---|--|
| Mr. Jitsuya ISHIGURO | Team Leader | Japan International Cooperation Agency |
| Mr. Hiroki TAZAWA | Project Coordinator | Japan International Cooperation Agency |
| Mr. Tsuyoshi YAMAJUKU | Chief Consultant/Road Planner | Katahira & Engineers International |
| Mr. Takayasu MAEHATA | Environment and Social Consideration | Katahira & Engineers International |

2.Survey Schedule

1st Preparatory Survey (25/1/2016-15/3/2016)

The Preparatory Survey on the Project for Reconstruction of Somalia Drive Phase-II in Monrovia Schedule of First Field Survey

| Month Day | Date | Tsuyoshi YAMAJUKU Chief Consultant / Road Plan | Kiyoshi MUKAI Vice Chief Consultant / Road Plan | Kazuharu KOISHIKAWA Pavement Design | Toshihiko AIZAWA Road / Structure Design | Tetsuo IKENAGA Natural Condition Survey | Kenji KOUDA Traffic Survey | Takayasu MAEHATA Environment and Social Consideration | Hiroshi NAKASHIMA Cost Estimation / Construction Planning |
|-----------|------|---|---|---|---|---|---|---|---|
| 24 | Sun | | | | | | | | |
| 25 | Mon | 1 NRT - 2 DXB - ACC 3 Courtesy Call on JICA & EOJ | 1 NRT - 2 DXB - ACC 3 Courtesy Call on JICA & EOJ | 1 NRT - 2 DXB - ACC 3 Courtesy Call on JICA & EOJ | 1 NRT - 2 DXB - ACC 3 Courtesy Call on JICA & EOJ | 1 NRT - 2 DXB - ACC 3 ACC - MON | 1 NRT - 2 DXB - ACC 3 ACC - MON | 1 NRT - 2 DXB - ACC 3 ACC - MON | |
| 26 | Tue | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | 4 Discussion with MPW 5 Discussion with MPW 6 Site Survey | |
| 27 | Wed | | | | | | | | |
| 28 | Thu | | | | | | | | |
| 29 | Fri | | | | | | | | |
| 30 | Sat | | | | | | | | |
| 31 | Sun | | | | | | | | |
| 1 | Mon | 8 Discussion with EPA 9 Site Survey | 8 Discussion with EPA 9 Site Survey | 8 Site Survey 9 Site Survey | 8 Site Survey 9 Site Survey | 8 Site Survey 9 Site Survey | 8 Site Survey 9 Site Survey | 8 Discussion with EPA 9 Site Survey | |
| 2 | Tue | 10 Site Survey | 10 Site Survey | 10 Site Survey | 10 Site Survey | 10 Site Survey | 10 Site Survey | 10 Site Survey | |
| 3 | Wed | 11 Site Survey | 11 Site Survey | 11 Site Survey | 11 Site Survey | 11 Site Survey | 11 Site Survey | 11 Site Survey | |
| 4 | Thu | 12 Site Survey | 12 Site Survey | 12 Site Survey | 12 Site Survey | 12 Site Survey | 12 Site Survey | 12 Site Survey | |
| 5 | Fri | 13 Site Survey | 13 Site Survey | 13 Site Survey | 13 Site Survey | 13 Site Survey | 13 Site Survey | 13 Site Survey | |
| 6 | Sat | 14 Site Survey | 14 Site Survey | 14 Site Survey | 14 Site Survey | 14 Site Survey | 14 Site Survey | 14 Site Survey | |
| 7 | Sun | 15 Site Survey | 15 Site Survey | 15 Site Survey | 15 Site Survey | 15 Site Survey | 15 Site Survey | 15 Site Survey | |
| 8 | Mon | 16 Site Survey | 16 Site Survey | 16 Site Survey | 16 Site Survey | 16 Site Survey | 16 Site Survey | 16 Site Survey | 1 NRT - BKK |
| 9 | Tue | 17 Site Survey | 17 Site Survey | 17 Site Survey | 17 Site Survey | 17 Site Survey | 17 Site Survey | 17 Site Survey | 2 BKK/BRU - MON |
| 10 | Wed | 18 Site Survey | 18 Site Survey | 18 Site Survey | 18 Site Survey | 18 Site Survey | 18 Site Survey | 18 Site Survey | 3 Discussion with MPW |
| 11 | Thu | 19 Site Survey | 19 Site Survey | 19 Site Survey | 19 Site Survey | 19 Site Survey | 19 Site Survey | 19 Site Survey | 4 Site Survey |
| 12 | Fri | 20 Site Survey | 20 Site Survey | 20 Site Survey | 20 Site Survey | 20 Site Survey | 20 Site Survey | 20 Site Survey | 5 Site Survey |
| 13 | Sat | 21 Site Survey | 21 Site Survey | 21 Site Survey | 21 Site Survey | 21 Site Survey | 21 Site Survey | 21 Site Survey | 6 Site Survey |
| 14 | Sun | 22 Site Survey | 22 Site Survey | 22 Site Survey | 22 Site Survey | 22 Site Survey | 22 Site Survey | 22 Site Survey | 7 Site Survey |
| 15 | Mon | 23 Site Survey | 23 Site Survey | 23 Site Survey | 23 Site Survey | 23 Site Survey | 23 Site Survey | 23 Site Survey | 8 Site Survey |
| 16 | Tue | 24 Site Survey | 24 Site Survey | 24 Site Survey | 24 Site Survey | 24 Site Survey | 24 Site Survey | 24 Site Survey | 9 Site Survey |
| 17 | Wed | 25 Site Survey | 25 Site Survey | 25 Site Survey | 25 Site Survey | 25 Site Survey | 25 Site Survey | 25 Site Survey | 10 Site Survey |
| 18 | Thu | 26 Site Survey | 26 Site Survey | 26 Site Survey | 26 Site Survey | 26 Site Survey | 26 Site Survey | 26 Site Survey | 11 Site Survey |
| 19 | Fri | 27 Site Survey | 27 Site Survey | 27 Site Survey | 27 Site Survey | 27 Site Survey | 27 Site Survey | 27 Site Survey | 12 Site Survey |
| 20 | Sat | 28 Site Survey | 28 Site Survey | 28 Site Survey | 28 Site Survey | 28 Site Survey | 28 Site Survey | 28 Site Survey | 13 Site Survey |
| 21 | Sun | 29 Site Survey | 29 Site Survey | 29 Site Survey | 29 Site Survey | 29 Site Survey | 29 Site Survey | 29 Site Survey | 14 Site Survey |
| 22 | Mon | 30 Site Survey | 30 Site Survey | 30 Site Survey | 30 Site Survey | 30 Site Survey | 30 Site Survey | 30 Site Survey | 15 Site Survey |
| 23 | Tue | 31 Site Survey | 31 Site Survey | 31 Site Survey | 31 Site Survey | 31 Site Survey | 31 Site Survey | 31 Site Survey | 16 Site Survey |
| 24 | Wed | 32 Site Survey | 32 Site Survey | 32 Site Survey | 32 Site Survey | 32 Site Survey | 32 Site Survey | 32 Site Survey | 17 Site Survey |
| 25 | Thu | 33 Site Survey | 33 Site Survey | 33 Site Survey | 33 Site Survey | 33 Site Survey | 33 Site Survey | 33 Site Survey | 18 Site Survey |
| 26 | Fri | 34 Site Survey | 34 Site Survey | 34 Site Survey | 34 Site Survey | 34 Site Survey | 34 Site Survey | 34 Site Survey | 19 Site Survey |
| 27 | Sat | 35 Site Survey | 35 Site Survey | 35 Site Survey | 35 Site Survey | 35 Site Survey | 35 Site Survey | 35 Site Survey | 20 Site Survey |
| 28 | Sun | 36 Site Survey | 36 Site Survey | 36 Site Survey | 36 Site Survey | 36 Site Survey | 36 Site Survey | 36 Site Survey | 21 Site Survey |
| 29 | Mon | 37 Discussion with EPA 38 Discussion on TN | 37 Discussion with EPA 38 Discussion on TN | 37 Site Survey 38 Discussion on TN | 37 Site Survey 38 Discussion on TN | 37 Site Survey 38 Discussion on TN | 37 Site Survey 38 Discussion on TN | 37 Discussion with EPA 38 Discussion on TN | 22 Site Survey |
| 1 | Tue | 39 Discussion on TN 40 Discussion with MPW | 39 Discussion on TN 40 Discussion with MPW | 39 Discussion on TN 40 Discussion with MPW | 39 Discussion on TN 40 Discussion with MPW | 39 Discussion on TN 40 Discussion with MPW | 39 Discussion on TN 40 Discussion with MPW | 39 Discussion on TN 40 Discussion with MPW | 23 Discussion on TN |
| 2 | Wed | 41 Site Survey | 41 Site Survey | 41 Site Survey | 41 Site Survey | 41 Site Survey | 41 Site Survey | 41 Site Survey | 24 Discussion on TN |
| 3 | Thu | 42 Site Survey | 42 Site Survey | 42 Site Survey | 42 Site Survey | 42 Site Survey | 42 Site Survey | 42 Site Survey | 25 Discussion on TN |
| 4 | Fri | 43 Site Survey | 43 Site Survey | 43 Site Survey | 43 Site Survey | 43 Site Survey | 43 Site Survey | 43 Site Survey | 26 Discussion on TN |
| 5 | Sat | 44 Site Survey | 44 Site Survey | 44 Site Survey | 44 Site Survey | 44 Site Survey | 44 Site Survey | 44 Site Survey | 27 Discussion with MPW |
| 6 | Sun | 45 Site Survey | 45 Site Survey | 45 Site Survey | 45 Site Survey | 45 Site Survey | 45 Site Survey | 45 Site Survey | 28 MON - |
| 7 | Mon | 46 Site Survey | 46 Site Survey | 46 Site Survey | 46 Site Survey | 46 Site Survey | 46 Site Survey | 46 Site Survey | 29 MON - ACC |
| 8 | Tue | 47 Site Survey | 47 Site Survey | 47 Site Survey | 47 Site Survey | 47 Site Survey | 47 Site Survey | 47 Site Survey | 30 BRU/IST - |
| 9 | Wed | 48 Site Survey | 48 Site Survey | 48 Site Survey | 48 Site Survey | 48 Site Survey | 48 Site Survey | 48 Site Survey | 31 ACC - |
| 10 | Thu | 49 Site Survey | 49 Site Survey | 49 Site Survey | 49 Site Survey | 49 Site Survey | 49 Site Survey | 49 Site Survey | 32 DXB - HND |
| 11 | Fri | | | | | | | | |
| 12 | Sat | | | | | | | | |
| 13 | Sun | | | | | | | | |
| 14 | Mon | 50 Courtesy Call on JICA & EOJ ACC - | 50 ACC - | | | | | | |
| 15 | Tue | 51 DXB - HND | 51 DXB - HND | | | | | | |

Remark) NRT: Tokyo(Narita)/Japan, DXB: Dubai / United Arab Emirate, ACC: Accra / Ghana, MON: Monrovia / Liberia, IST: Istanbul / Turkey, BRU: Brussel / Belgium, HND: Tokyo(Haneda) / Japan
JICA: Japan International Cooperation Agency, EOJ: Embassy of Japan in Ghana, MPW: Ministry of Public Works, EPA: Environmental Protection Agency, TN: Technical Note

2.Survey Schedule

2nd Preparatory Survey (21/7/2016-4/8/2016)

Schedule of Preparatory Survey Team for Somalia Drive Phase-2 (21,July, 2016-4, August, 2016)

| Name | | | Mr.Tsuyoshi YAMAJUKU | Mr.Kiyoshi MUKAI | Mr.Takayasu MAEHATA |
|----------|-----------|-----|--|---|---|
| Position | | | Chief Consultant / Road Planner. (Katahira & Engineers International) | Deputy Chief Consultant / Road Planner. (Katahira & Engineers International) | Environment Specialist / Social Specialist. (Katahira & Engineers International) |
| No. | Date | Day | | | |
| 1 | 21-Jul-16 | Thu | Narita → Dubai → | | |
| 2 | 22-Jul-16 | Fri | → Accra / PM: Visit to JICA in Accra | | |
| 3 | 23-Jul-16 | Sat | Accra → Monrovia | | |
| 4 | 24-Jul-16 | Sun | Site Survey | | |
| 5 | 25-Jul-16 | Mon | Site Survey | | |
| 6 | 26-Jul-16 | Tue | Site Survey | | |
| 7 | 27-Jul-16 | Wed | Meeting with MPW | | |
| 8 | 28-Jul-16 | Thu | Meeting with MPW | | |
| 9 | 29-Jul-16 | Fri | Meeting with MPW, Stakeholder Meeting | | |
| 10 | 30-Jul-16 | Sat | Site Survey | | |
| 11 | 31-Jul-16 | Sun | Site Survey | | |
| 12 | 01-Aug-16 | Mon | Signing of Technical Note | | |
| 13 | 02-Aug-16 | Tue | Monrovia → Accra | | |
| 14 | 03-Aug-16 | Wed | Visit to EOJ,JICA in Accra / PM: Accra → | | |
| 15 | 04-Aug-16 | Thu | → Dubai → Narita | | |

EOJ:Embassy of Japan

MPW:Ministry of Public Works

EPA:Environmental Protection Agency

MOT:Ministry of Transport

2.Survey Schedule

Explanation on Draft final Report (25/11/2016-9/12/2016)

DOD Schedule of Preparatory Survey Team for Somalia Drive Phase-2 (6,November, 2016-20,November, 2016)

| Name | | | Mr.Jitsuya ISHIGURO | Mr.Tsuyoshi YAMAJUKU | Mr.Takayasu MAEHATA |
|----------|-----------|-----|---|--|---|
| Position | | | Leader (Japan International Cooperation Agency) | Chief Consultant / Road Planner. (Katahira & Engineers International) | Environment Specialist / Social Specialist. (Katahira & Engineers International) |
| No. | Date | Day | | | |
| 1 | 06-Nov-16 | Sun | Narita → Dubai | | |
| 2 | 07-Nov-16 | Mon | AM:Dubai → Accra, PM: Visiting to EOJ, JICA | | |
| 3 | 08-Nov-16 | Tue | Accra → Monrovia | | |
| 4 | 09-Nov-16 | Wed | Meeting with MPW | | |
| 5 | 10-Nov-16 | Thu | Meeting with MPW | | |
| 6 | 11-Nov-16 | Fri | AM:Meetg with MPW , PM:Signing of MD | | |
| 7 | 12-Nov-16 | Sat | | Site Survey | |
| 8 | 13-Nov-16 | Sun | Meeting with Investigation team , Site Survey | | |
| 9 | 14-Nov-16 | Mon | Site Survey | | |
| 10 | 15-Nov-16 | Tue | Meeting with MPW, Stakeholder Meeting | | |
| 11 | 16-Nov-16 | Wed | Meeting with MPW | | |
| 12 | 17-Nov-16 | Thu | AM:Signing of Technical Note, PM:Monrovia → Accra | | |
| 13 | 18-Nov-16 | Fri | AM:Visiting to EOJ, JICA PM:Accra → Nairobi | AM:Visiting to EOJ, JICA PM:Accra → Dubai | |
| 14 | 19-Nov-16 | Sat | Dubai → | Dubai → | |
| 15 | 20-Nov-16 | Sun | | → Narita | → Narita |

EOJ:Embassy of Japan

MPW:Ministry of Public Works

EPA:Environmental Protection Agency

MOT:Ministry of Transport

3. List of parties Concerned

Ministry of Public Works (MPW)

- ✓ Minister : Mr. William Gyude Moore
- ✓ Deputy Minister for Technical Services : Dr. Claude E. Langley
- ✓ Assistant Minister for Technical Services : Mr. Daniel Socree
- ✓ Assistant Minister : Mr. Edsel Edward Smith
- ✓ Deputy Program Director (Chief of IIU) : Mr. Emmanuel K. Baker
- ✓ Technical Engineer : Mr. Eric Gabriel Jenn
- ✓ Technical Engineer : Ms. Jocelia Taplah
- ✓ Zoning Division : Mr. Sam F. Kpakio
- ✓ Zoning Division : Mr. Yallah M. Korhene
- ✓ Material Engineer, Head of Laboratory for Soil & Materials : Ms. Yei Danlette Suah
- ✓ Monsterrado Country Resident Engineer, Operation Department : Mr. C. Seth Quaye
- ✓ Project Engineer, Operation Dep. : Mr. G. Francis Carter
- ✓ Resident Engineer, Operation Dep. : Mr. Anthony G. Siaway

Ministry of Foreign Affairs, International Cooperation & Economic Affairs

- ✓ Assistant Minister : Mr. Dehpue Y. Zuo

Environmental Protection Agency (EPA)

- ✓ Assistant Manager ESIA : Mr. Aloysius K. Kotee
- ✓ Assistant Manager ERS : Mr. John K. Jallah Jr.

Executive Office of the President

- ✓ Deputy Head : Mr. Amos S. Siebo, Jr.
- ✓ Program Officer : Mr. Alfred Karpeh Gipli

Ministry of Transport (MoT)

- ✓ Director, Liberia Meteorological Service : Mr. Arthur Gar-Glahn

Ministry of Lands, Mines & Energy (MLME), Hydrological Service(LHS)

- ✓ Director : Mr. Jefferson W. Wylie
- ✓ Assistant Director : Mr. Antony D. Kpadeh

University of Liberia

- ✓ Professor of Civil Engineering : Mr. John K. Boimah
- ✓ Lecturer of Topographic Surveying : Mr. Menoev T. Powoe

Polytechnic of Liberia

- ✓ Lecturer of Architecture w/t Laboratory : Mr. Peter B. Natt

Liberia Water & Sewer Corporation

- ✓ Director : Mr. Joe S. Molue

World Bank Ghana Office

✓ Infrastructure, Liberia : Mr. John Kobina Richardson

Embassy of Japan

✓ Ambassador Extraordinary and Plenipotentiary : Mr. Kaoru YOSHIMURA

✓ First Secretary : Dr. Yoshihiko HIGUCHI

✓ First Secretary : Mr. Yuki TAKANASHI

JICA Ghana Office

✓ Chief Representative : Mr. koji MAKINO

✓ Senior Representative : Mr. Hiroshi SUMIYOSHI

✓ Senior Representative : Mr. Toshihisa HASEGAWA

✓ Senior Representative : Mr. Norihito YONEBAYASHI

✓ Representative : Mr. Tomonari TAKEUCHI

✓ Assistant Representative : Mr. Hiroki TAZAWA

JICA Liberia Field Office

✓ Project Formulation Advisor : Mr. Shigeki NAMBA

✓ Project Formulation Advisor : Ms. Michiko YOKOYAMA

✓ Deputy Head Office : Ms. Mai SUZUKI

4. Minutes of Discussions
1st Site Survey (February 13 ,2016)

MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY (OUTLINE DESIGN STUDY)
ON
THE PROJECT FOR RECONSTRUCTION OF SOMALIA DRIVE IN MONROVIA
PHASE 2
IN THE REPUBLIC OF LIBERIA

In response to a request from the Government of the Republic of Liberia (hereinafter referred to as "GoL"), the Government of Japan (hereinafter referred to as "GoJ") decided to conduct a Preparatory Survey for Outline Design (hereinafter referred to as "the Survey") on the Project for Reconstruction of Somalia Drive in Monrovia Phase 2 (hereinafter referred to as "the Project"), and entrusted the Survey to Japan International Cooperation Agency (hereinafter referred to as "JICA").

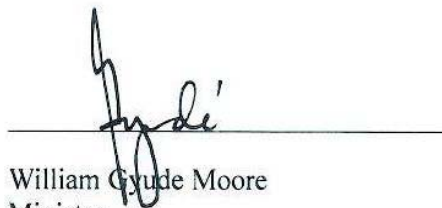
JICA sent a Preparatory Survey Team for Outline Design (hereinafter referred to as "the Team") to Liberia. The Team is headed by Mr. Jitsuya Ishiguro, Advisor, Team 1, Transportation and ICT Group, Infrastructure and Peacebuilding Department, JICA and is scheduled to stay in the country from January 27 to March 9, 2016.

The Team held a series of discussions with the officials of the GoL and conducted a field survey at the Project site. In the course of the discussions, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Monrovia, February 13, 2016



Jitsuya Ishiguro
Leader
Preparatory Survey Team
Japan International Cooperation Agency



William Gyude Moore
Minister
Ministry of Public Works

ATTACHMENT

1. Objective of the Project
The objective of the Project is to improve the traffic capacity of the Somalia Drive by rehabilitating its existing two-lane carriage way, thereby contributing to improved urban mobility and logistics in Monrovia.
2. Project Site
The Project site is in the Greater Monrovia District as shown in Annex-1.
3. Implementing Organization
The implementing agency of the Project is the Ministry of Public Works (hereinafter referred to as “MPW”). The organization chart is shown in Annex 2.
4. Items requested by the GoL
 - 4-1. The requested items for the phase 2 project are rehabilitation of the existing two-lane carriage way of the Somalia Drive (from the Free Port junction to the Red Light junction) and installation of auxiliary facilities.
 - 4-2. JICA will assess the appropriateness of the project component(s) recommended by the Survey and will report the findings to the GoJ. Implementation of the Project will be decided by the GoJ.
5. Japan’s Grant Aid Scheme
 - 5-1. The Liberian side understands the Japan’s Grant Aid Scheme and the necessary measures to be taken by the GoL as explained by the Team and described in Annex 3 and 4.
 - 5-2. The Liberian side will take the necessary measures, as described in Annex-5, for smooth implementation of the Project.
6. Schedule of the Survey
 - 6-1. The Team will proceed with further studies in Liberia intermittently until June 2016.
 - 6-2. JICA will prepare a draft final report in English and dispatch a mission to Liberia in order to explain its contents tentatively around October 2016.
 - 6-4. When the contents of the report are accepted in principle by the GOL, JICA will complete the final report in English and send it to the GOL around January 2017.
7. Environmental and Social Considerations
 - 7-1. The Team explained that all JICA financed project shall comply with the JICA Guidelines for Environmental and Social Considerations (April 2010) (the “Guidelines”). The Project is tentatively categorized as “Category B,” because the project is not considered as a large-scale road and bridge project, is not located in a sensitive area, and has none of the sensitive characteristics under the Guidelines, it is not likely to have significant adverse impact on the environment. The guidelines can be downloaded at the following URL.
http://www.jica.go.jp/english/our_work/social_environmental/guideline/pdf/guideline100326.pdf
 - 7-2. The Team explained that JICA conducts an environmental review in accordance with the project category and refers to the environmental checklist for the road sector as attached in the Guidelines.
 - 7-3. Both sides confirmed that an environmental permit is necessary for the Project in accordance with regulations of the GOL, and that MPW shall obtain the permission for the Project from the Environmental Protection Agency.

- 7-4. The Team prepares a draft EIA report and draft Abbreviated Resettlement Action Plan (ARAP).
- 7-5. MPW shall secure the necessary land for the Project in accordance with the Liberian law. The expenses of the procedures and compensation to the Project Affected Persons (PAPs) shall be borne by MPW. MPW shall hold meetings and/or negotiate with land and property owners and confirm the extent of the expropriation and/or temporary use of land necessary for the Project by the end of the Survey. MPW shall report the results to JICA.
- 7-6. The consultant members of the Team shall provide MPW with necessary information of outline design, before the end of the Survey in order for MPW to smoothly carry out the abovementioned procedures.
- 7-7. Based upon the request from JICA, GOL agreed to follow properly its national guideline, in case resettlement is needed in order to secure the Right of Way (ROW) along the project site.

8. Construction Safety

The Team explained that the “Guidance for the Management of Safety for Construction Works in Japanese ODA Projects” shall be applied to the works for the Project to ensure the safety of the Project Stakeholders during construction works at site and protect nearby local residents, and any other third parties, from every potential accidental risk foreseen to arise from the construction works at site. The team also indicated the Guidance is available in JICA official website below;

http://www.jica.go.jp/english/our_work/types_of_assistance/c8h0vm00008zx0m8-att/guidance_en.pdf

9. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, GOL and relevant organizations shall provide JICA with such information as JICA may reasonably request and vice versa. GOL and JICA will not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project in accordance with the respective laws..

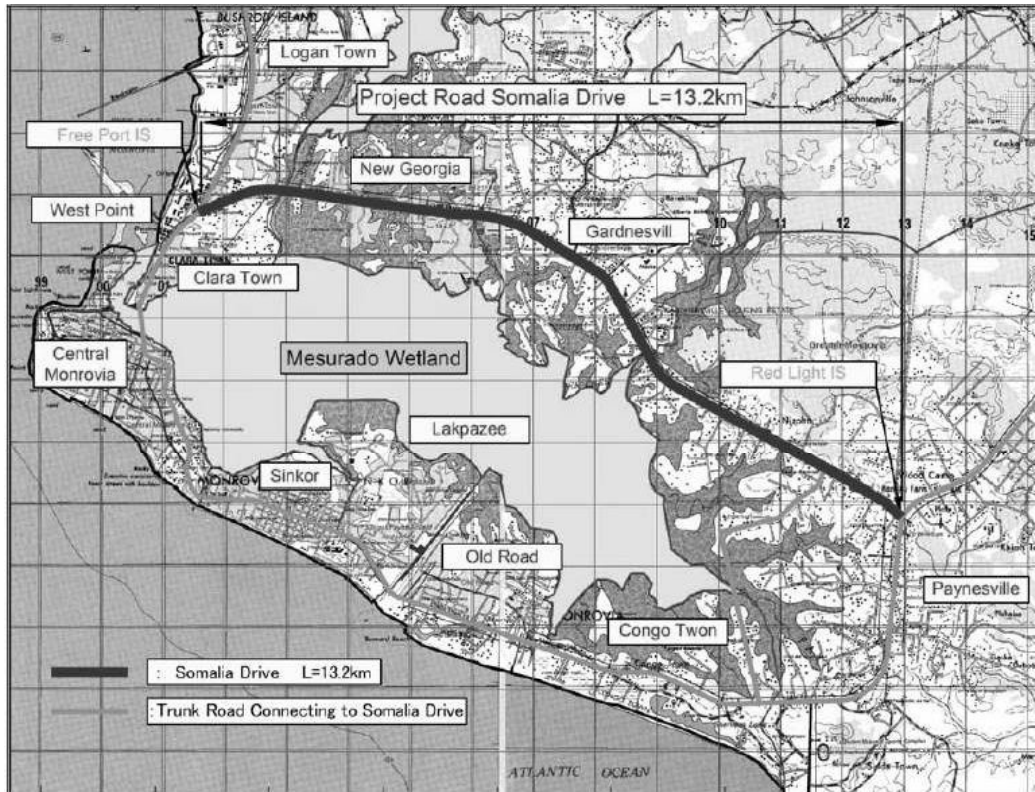
10. Other Relevant Issues

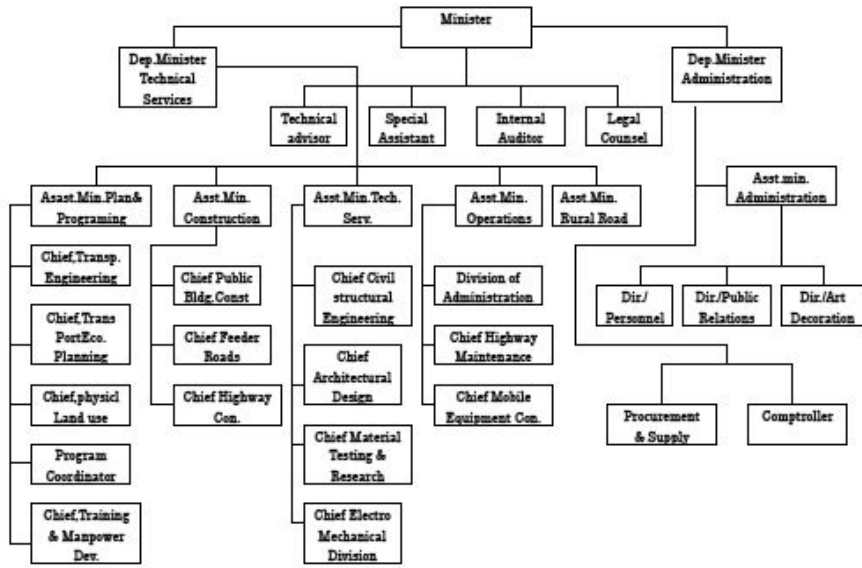
The Liberian side shall, at its own expenses, provide the Team with the following items in cooperation with organizations concerned.

- (1) Security-related information as well as measures to ensure the safety of the Team members;
- (2) Information as well as support in obtaining medical service;
- (3) Data and information related to the Preparatory Survey;
- (4) Counterpart personnel;
- (5) Suitable office space with necessary equipment and services;
- (6) Credentials or identification cards;
- (7) Entry permits necessary for the survey team members to conduct field surveys; and
- (8) Support in obtaining other privileges and benefits if necessary.

- Annex-1 Project Site
 Annex-2 Organization Chart
 Annex-3 Japan’s Grant Aid
 Annex-4 Flow Chart of Japan’s Grant Aid Procedures

Annex-5 Major Undertakings to be taken by Each Government





MPW – organization chart

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as “the GOJ”) is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and 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. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as “the G/A”)
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of 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 country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme 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.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever 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 organization of the recipient country which actually implements the Project. Therefore, the implementation of

the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered 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 appropriateness of the Project.

3. Japan's Grant Aid Scheme

(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 country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) 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 country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex 5.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the

recipient country.

(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA guidelines for environmental and social considerations.

| Stage | Flow & Works | Recipient Government | Japanese Government | JICA | Consultant | Contract | Others |
|-----------------------------------|---|----------------------|---------------------|------|------------|----------|--------|
| Application | Request (T/R : Terms of Reference) | | | | | | |
| | Screening of Project → Evaluation of T/R → Project Identification Survey* | | | | | | |
| Project Formulation & Preparation | Preparatory Survey Preliminary Survey* → Field Survey Home Office Work Reporting Outline Design → Selection & Contracting of Consultant by Proposal → Field Survey Home Office Work Reporting Explanation of Draft Final Report → Final Report Final Report *if necessary | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Appraisal & Approval | Appraisal of Project | | | | | | |
| | Inter Ministerial Consultation | | | | | | |
| | Presentation of Draft Notes | | | | | | |
| | Approval by the Cabinet | | | | | | |
| Implementation | E/N and G/A (E/N: Exchange of Notes) (G/A: Grant Agreement) | | | | | | |
| | Banking Arrangement (A/P: Authorization to Pay) | | | | | | |
| | Consultant Contract → Verification → Issuance of A/P | | | | | | |
| | Detailed Design & Tender Documents → Approval by Recipient Government → Preparation for Tendering | | | | | | |
| | Tendering & Evaluation | | | | | | |
| | Procurement /Construction Contract → Verification → A/P | | | | | | |
| | Construction → Completion Certificate Recipient Government → A/P | | | | | | |
| | Operation → Post Evaluation Study | | | | | | |
| | Ex-post Evaluation | | | | | | |
| | Follow up | | | | | | |

Major Tasks to be Undertaken by Each Government

Major undertakings to be taken by the recipient government

1. Before the Tender

| NO | Items | Deadline | In charge | Cost | Ref. |
|----|---|--------------------------------------|-----------|------|------|
| 1 | To open Bank Account (Banking Arrangement (B/A)) | within 1 month after G/A | MPW | | |
| 2 | To approve IEE/EIA | within 1 month after G/A | EPA | | |
| 3 | To implement social and environmental consideration measures given in EIA | before the cabinet approval | MPW | | |
| 4 | To secure the following lands 1) temporary construction yard and stock yard near the Project area 2) borrow pit and disposal site near the Project area | before notice of the tender document | MPW | | |
| 5 | To obtain the planning, zoning, building permit | before notice of the tender document | MPW | | |
| 6 | To clear, level and reclaim the following sites 1) leveling and reclaiming the sites | before notice of the tender document | N.A. | | |

2. During the Project Implementation

| NO | Items | Deadline | In charge | Cost | Ref. |
|----|---|--|-----------|------|------|
| 1 | To bear the following commissions to a bank of Japan for the banking services based upon the B/A | | MPW | | |
| | 1) Advising commission of A/P | within 1 month after the signing of the contract | MPW | | |
| | 2) Payment commission for A/P | every payment | MPW | | |
| 2 | To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country | | | | |
| | 1) Tax exemption and customs clearance of the products at the port of disembarkation | during the Project | MFDP(?) | | |
| | 2) Internal transportation from the port of disembarkation to the project site | during the Project | N.A. | | |

| | | | | | |
|---|---|--|---------------|--|--|
| 3 | To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract 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 | MPW? | | |
| 4 | 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 borne by its designated authority without using the Grant; 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 | MPW? MFDP? | | |
| 5 | 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 | MPW | | |
| 6 | To construct access roads | | | | |
| | 1) Outside the site | 3 months before completion of the construction | N.A. | | |
| 7 | To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities | | | | |
| | 1) Electricity The distributing line to the site | before start of the construction | ??? | | |
| | 2) Water Supply The city water distribution main to the site | 6 months before completion of the construction | ??? | | |
| | 3) Drainage The city drainage main (for storm, sewer and others) to the site | 6 months before completion of the construction | ??? | | |
| | 4) Furniture and Equipment General furniture | 1 month before completion of the construction | ??? | | |

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 maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection | After completion of the construction | MPW | | |

(B/A: Banking Arrangement, A/P: Authorization to pay, N.A.: Not Applicable)

Major Undertakings to be Covered by the Japanese Grant

| No | Items | Cost Estimated (Million Japanese Yen)* |
|----|--|--|
| 1 | To construct roads/bridges (or To procure equipment) | XX.XX |
| | - Improvement of roads | |
| | 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 main circuit breaker and transformer | |
| | b) Water Supply | |
| | - The supply system within the site (receiving and/or elevated tanks) | |
| | c) Drainage | |
| | - The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site | |
| | d) Furniture and Equipment | |
| | - Project equipment | |
| 2 | To implement detailed design, tender support and construction supervision (Consultant) | YY.YY |
| 3 | Contingencies | ww.ww |
| | Total | ZZ.ZZ |

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan.

4. Minutes of Discussions
Explanation of Draft Preparatory Survey Report (November 10, 2016)

Minutes of Discussions
on
the Preparatory Survey for the Project
for
Reconstruction of Somalia Drive in Monrovia (Phase 2)
in the Republic of Liberia
(Explanation on Draft Preparatory Survey Report)

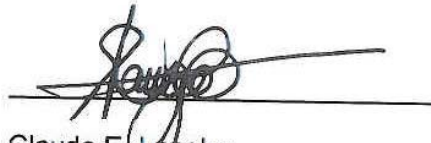
With reference to the minutes of discussions signed between the Ministry of Public Works (hereinafter referred to as "MPW") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on November 10, 2016 and in response to the request from the Government of the Republic of Liberia (hereinafter referred to as "Liberia") dated July 15, 2009, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Reconstruction of Somalia Drive in Liberia Phase 2 (hereinafter referred to as "the Project"), headed by Mr. Ishiguro, Acting Director, Team 1, Transportation and ICT Group, Infrastructure and Peacebuilding Department from November 8 to 17, 2016.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Monrovia, November, 10th 2016



Jitsuya Ishiguro
Leader
Preparatory Survey Team
Japan International Cooperation
Agency



Claude E. Langley
Deputy Minister for Technical Services
Ministry of Public Works - Liberia

ATTACHEMENT

1. Responsible authority for the Project

Both sides confirmed that the Ministry of Public Works 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 taken care by relevant authorities properly and on time.

2. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Liberian side agreed to its contents.

3. Cost estimate

Both sides confirmed that the cost estimate described in Annex 1 is provisional and will be examined further by the Government of Japan for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.

4. Confidentiality of the cost estimate and technical specifications

Both sides confirmed that the cost estimate and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts under the Project are concluded.

5. Timeline for the project implementation

The Team explained to the side that the expected timeline for the project implementation is as attached in Annex 2.

6. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Liberian side will be responsible for monitoring agreed key indicators targeted in year 2024 and shall monitor the progress based on those indicators.

[Quantitative Effect]

| Indicators | Base year 2016 | Target year 2024 (3 years after project completion) |
|--|-------------------|--|
| Annual Average Daily Traffic Volume (pcu/day) | 24,713 | 39,000 |
| Travel time (minutes) Free Port-Red Light AM Peak Time | 61 | 18 |

[Qualitative Effect]

- Improved safety for pedestrians and vehicles
- Maintenance frequency reduced with road drainage facility protecting base course and sub-base from damage by water penetration

7. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 3. With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in 1. (1) of Annex 3, both sides confirmed that such customs duties, internal taxes and other fiscal levies include VAT, commercial tax, income tax and corporate tax, which shall be clarified in the bid documents by the Executing Agency during the implementation stage of the Project.

The Liberian side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 3 will be used as an attachment of G/A.

8. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 4. The timing of submission of the PMR is described in Annex 3.

9. Project completion

Both sides confirmed that the project completes when all the facilities constructed and equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

10. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Liberian side is required to provide necessary support for the data collection.

11. Items and measures to be considered for the smooth implementation of the Project

Both sides confirmed the items and measures to be considered for the smooth implementation of the Project as follows:

- Resettlement Project Affected Persons before tender notice as per (1) of Annex 3
- Obtaining construction permission from MPW before tender notice
- Tax exemption described in (2) 5 of Annex 3 is approved by MPW before tender notices

- Construction safety secured with reference to the "Guidance for the Management of Safety for Construction Works in Japanese ODA Projects"

12. Schedule of the Study

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Liberian side around February 2017.

13. Environmental and Social Considerations

13-1 General Issues

13-1-1 Environmental Guidelines and Environmental Category

The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as B because the project is not considered as a large-scale road and bridge project, is not located in a sensitive area, and has none of the sensitive characteristics under the Guidelines, it is not likely to have significant adverse impact on the environment.

13-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 5. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, the Liberian side shall submit the modified version to JICA in a timely manner.

13-2 Environmental Issues

13-2-1 Environmental and Social Impact Assessment (ESIA)

Both sides confirmed that the environmental permit for the Project was issued on October 11, 2016 by the Environmental Protection Agency (EPA) based on the submitted ESIA and ARAP.

13-2-2 Environmental Monitoring Plan

Both sides confirmed the Environmental Monitoring Plan (EMoP) of the Project is as Annex 6. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMoP, which may be updated during the detailed design stage.

13-3 Social Issues

13-3-1 Land Acquisition and Resettlement

Both sides confirmed that 26 Households /40 people would be relocated due to the implementation of the Project.

Such land acquisition and resettlement shall be implemented based on the Abbreviated Resettlement Action Plan (ARAP) as Annex 8 which was prepared in line with the Guidelines and was authorized by the Liberian side in October 2016.

13-3-2 Indigenous People

Both sides confirmed that there is no indigenous people affected by the Project.

13-4 Environmental and Social Monitoring

13-4-1 Environmental Monitoring

Both sides agreed that the Liberian side will submit results of environmental monitoring to JICA with PMR by using the monitoring form attached as Annex 7. The timing of submission of the monitoring form is described in Annex 5.

13-4-2 Social Monitoring

Both sides confirmed that the Liberian side will implement social monitoring about land acquisition and resettlement proposed in the ARAP. The Liberian side and the Team agreed that MPW will submit results of social monitoring to JICA with PMR by using the monitoring form attached as Annex 7.

13-4-3 Information Disclosure of Monitoring Results

Both sides confirmed that the Liberian side will disclose results of environmental and social monitoring to local stakeholders through their website / in their field offices.

The Liberian side agreed JICA will disclose results of environmental and social monitoring submitted by the Liberian side as the monitoring forms attached as Annex 8 on its website.

14. Other Relevant Issues

14-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

14-2. Operation and Maintenance

The Team explained that continued prevalence of heavy loaded and overloading trucks might harm the pavement and lead to deterioration before its design life. Making road users respect load control regulations and its enforcement is fundamental to maintain the road asset value created and renewed by the Project. Also there is a risk that after completion of the Project increased driving speed by road users might lead to road fatalities. The Liberian side took note of these points and will coordinate with the concerned authorities to ensure road safety and load control regulations.

Annex 1 Project Cost Estimation

Annex 2 Project Implementation Schedule

Annex 3 Major Undertakings to be taken by the Government of Liberia

Annex 4 Project Monitoring Report (template)

Annex 5 Environmental Checklist

Annex 6 Environmental Monitoring Plan

Annex 7 Environmental and Social Monitoring Form

Annex 8 Abbreviated Resettlement Action Plan

Annex 1 Project Cost Estimation

CONFIDENTIAL

(1) Cost Borne by the Government of Japan

(2) Cost Borne by the Government of the Republic of Liberia

- Relocation of Utility and Environmental Monitoring, etc.: JPY23million

(3) Conditions of Cost Estimation

- Estimated timing: March 2016
- Exchange rates: USD 1.00 = JPY 119.47
- Others: The project is implemented in accordance with the system of Japan's Grant Aid. The above cost estimation does not assure the ceiling cost on the E/N and shall be reviewed by GOJ before signing of the E/N between the two Governments.



Annex 2 Project Implementation Schedule

| Year | 2017 | | | | | | | | | | | | 2018 | | | | | | | | | | | | 2019 | | | | | | | | | | | | 2020 | | | | | | | | | | | |
|-----------------|-----------------|---|---|---|---|---|---|---|---|----|----|----|------------------|---|---|---|---|---|---|---|---|----|----|----|----------------------|---|---|---|---|---|---|---|---|----|----|----------------------|--------------------------|---|---|---|---|---|---|---|---|----|----|----|
| Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Detailed Design | Site survey | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Design in Japan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction | Tender | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | Preparation Work | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | Earth & Subbase Work | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Drainage, Retaining Wall | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Binder & Surface Course | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Safety Facility Work | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Cleaning | | | | | | | | | | | | |

Annex 3 Major Undertakings to be taken by the Government of Liberia

1. Specific obligations of the Government of Liberia which will not be funded with the Grant
(1) Before the tender

| NO | Items | Deadline | in charge | estimated cost | ref |
|----|---|---|-----------|----------------|-----|
| 1 | To open bank account (B/A) | within 1 month of the signing of the G/A | MPW | Nil | |
| 2 | To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant | within 1 month of the signing of the contract | MPW | | |
| 3 | To approve EIA(Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation. | Environmental Permit was issued on October 11, 2016 by EPA. | EPA | | |
| 4 | To secure the necessary budget and implement land acquisition and resettlement (including preparation of resettlement sites), and compensation with full replacement cost in accordance with RAP | before notice of the bidding document | MPW | | |
| 5 | 1) 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 | till land acquisition and resettlement complete | MPW | | |
| 6 | To secure and clear the following lands: 1) Right of Way: the right side of Sta.0+000-Sta.13+200 2) Temporary construction yard and stock yard near the Project area 3) Borrow pit and disposal site near the Project area | before notice of the bidding document | MPW | | |
| 7 | To obtain the planning, zoning, building permit | before notice of the bidding document | MPW | | |
| 8 | To clear, level and reclaim the following sites 1) Remove utilities (Road Crossing Water Pipe) 2) Existing facilities (Street lighting Foundation) | before notice of the bidding document | MPW | | |
| 9 | To submit Project Monitoring Report (with the result of Detail Design) | before preparation of bidding documents | MPW | | |

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(2) During the Project Implementation

| No. | Items | Deadline | In charge | Estimated Cost | Ref. |
|-----|--|---|-----------|----------------|------|
| 1 | To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Supplier(s) | within 1 month after the signing of the contract(s) | MPW | | |
| 2 | To bear the following commissions to a bank in Japan for the banking services based upon the B/A | | MPW | | |
| | 1) Advising commission of A/P | within 1 month after the signing of the contract(s) | MPW | | |
| | 2) Payment commission for A/P | every payment | MPW | | |
| 3 | to ensure prompt unloading and customs clearance at ports of disembarkation in recipient country and to assist the Supplier(s) with internal transportation therein | during the Project | MPW | | |
| 4 | To accord Japanese nationals 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 country of the Recipient and stay therein for the performance of their work | during the Project | MPW | | |
| 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 as follows. - Custom duty - Corporation tax - Income tax The following shall be borne by its designated authority without using the Grant; -Value Added Tax (VAT) | during the Project | MPW | | |
| 6 | To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project | during the Project | MPW | | |
| 7 | 1) To submit Project Monitoring Report | every month | MPW | | |
| | 2) To submit Project Monitoring Report (final) | within one month after signing of Certificate of Completion for the works under the contract(s) | MPW | | |
| 8 | To submit a report concerning completion of the Project | within six months after completion of the Project | MPW | | |

| | | | | | |
|----|--|---|----------------|--|--|
| 9 | To provide facilities for distribution of electricity, water supply facilities necessary for the implementation of the Project inside the site(s) | | MPW | | |
| | 1) Electricity a) The distributing line to the temporary site yard b) Permanent power supply (Primary line:AC200V) for traffic signal and Street lighting | before start of the construction | MPW | | |
| | 2) Water Supply The city water distribution main to the temporary site yard | before start of the construction | MPW | | |
| 10 | To take necessary measure for safety construction - traffic control - rope off - UXO removal | during the construction | MPW AFL | | |
| 11 | To implement EMP and EMoP | during the construction | MPW | | |
| 12 | 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 | MPW | | |
| 13 | To implement RAP (livelihood restoration program, if needed) | for a period based on livelihood restoration program | MPW | | |
| 14 | 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 MPW 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) | MPW | | |

(3) After the Project

| NO | Items | Deadline | In charge | Estimated Cost | Ref. |
|----|--|--------------------------------------|-----------|----------------|------|
| 1 | To implement EMoP | for a period based on EMoP | MPW | | |
| 2 | 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 MPW and JICA. | for three years after the Project | MPW | | |
| 3 | To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection | After completion of the construction | MPW | | |



Annex 4 Project Monitoring Report (template)

| |
|--|
| <p><u>Project Monitoring Report</u> on <u>Project Name</u> Grant Agreement No. <u>XXXXXXXX</u> 20XX, Month</p> |
|--|

Organizational Information

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

General Information:

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

1: Project Description

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)

2-3 Implementation Schedule

| Items | Original | | Actual |
|-------|----------------------------------|--|--------|
| | (proposed in the outline design) | (at the time of signing the Grant Agreement) | |
| | | | |

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

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 (proposed in the outline design) | Actual (in case of any modification) | Original ^{1),2)} (proposed in the outline design) | 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 (proposed in the outline design) | Actual (in case of any modification) | Original ^{1),2)} (proposed in the outline design) | Actual |
| | | | | |

7m \$

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| | 1. | | | |
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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: |
| 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: |
| 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: |
| | |
| | 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 | | 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)

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 Cost | (A/D%) | (B/D%) | (C/D%) | |
| 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%) | |

Annex 5 Environmental Checklist

| Category | Environmental Item | Main Check Items | Yes: Y No: N | Confirmation of Environmental Considerations (Reasons, Mitigation Measures) |
|---------------------------|---|--|----------------------------------|---|
| 1 Permits and Explanation | (1) EIA and Environmental Permits | (a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government? | (a) Y (b) N (c) - (d) - | (a) EIA/RAP reports were prepared. (b) EIA license was issued in October 2016. (c) No conditions was imposed (d) No license and/or permission is required except for EIA license issued by EPA. |
| | (2) Explanation to the Local Stakeholders | (a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design? | (a) Y (b) Y | (a) At the stage of EIA/RAP preparation, sufficient stakeholder meetings were taken place and consensus/understanding from local stakeholders and authorities concerned to the Project was obtained. (b) Opinions raised from local resident were reflected to the Project design including Resettlement Action Plan (RAP) as much as possible. |
| | (3) Examination of Alternatives | (a) Have alternative plans of the project been examined with social and environmental considerations? | (a) Y | (a) 5 alternatives including no-action were examined with social and environmental considerations and most suitable alternative was selected. |
| 2 Pollution Control | (1) Air Quality | (a) Is there a possibility that air pollutants emitted from the project related sources, such as vehicles traffic will affect ambient air quality? Does ambient air quality comply with the country's air quality standards? Are any mitigating measures taken? (b) Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse? | (a) Y (b) N | (a) Since the Project is to expand the existing road, the volume of traffic is expected to increase. However the total of emission volume from the traffic is going to decrease by 40% compared with the no-action due to speed-up of travel speed. Also ambient air quality is expected to be under Draft standard of ambient air quality in Liberia and that of WHO. (b) It is expected that ambient air quality will not exceed the standard above. However mitigation measures as follows will be taken, (1) periodical monitoring surveys for ambient air quality, (2) promotion of lead-free gasoline, (3) |

| | | | | |
|---------------------|-------------------------|---|--|---|
| | | | | promotion of crackdown against ill-serviced vehicles. |
| | (2) Water Quality | <p>(a) Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas?</p> <p>(b) Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater?</p> <p>(c) Do effluents from various facilities, such as parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas not to comply with the country's ambient water quality standards?</p> | <p>(a) Y</p> <p>(b) Y</p> <p>(c) -</p> | <p>(a) It is possible. However it is expected that the water quality degradations in downstream water areas will be limited based on reasons that (1) large-scaled earth cutting and filling are not planned, (2) appropriate slope protections is taken.</p> <p>(b) It is expected that spilled oil on the road is flown out by rain water and contaminate groundwater etc. However it is also expected that the impact is limited based on reasons that (1) the amount of spilled oil on the road is a little, (2) crackdowns against ill-serviced vehicles is promoted.</p> <p>(c) No parking area/service area is designed in the Project components.</p> |
| | (3) Wastes | <p>(a) Are wastes generated from the project facilities, such as parking areas/service areas, properly treated and disposed of in accordance with the country's regulations?</p> | <p>(a) -</p> | <p>(a) No parking area/service area is designed in the Project components.</p> |
| 2 Pollution Control | (4) Noise and Vibration | <p>(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?</p> | <p>(a) Y/N</p> | <p>(a) Draft standard for noise has been prepared but that for vibration does not exist. Therefore as for noise, Draft standard in Liberia and International Financial Corporation(IFC) standard and as for vibration Ghana standard are used to evaluate the current level in the Project site. Regarding noise, based on the baseline survey, 3 out of 4 survey points are over Draft Liberian standard and IFC standard. Regarding vibration, based on the baseline survey, most of points are below standard in Ghana. As mitigation measures in operation phase, (1) planted trees in green belt will be maintained well, (2) crackdown against ill-serviced vehicles is promoted, (3) crackdown against over-loaded vehicles is promoted, (4) periodical monitoring surveys for noise and vibration are done.</p> |

| | | | | |
|-----------------------|---------------------|--|--|--|
| 3 Natural Environment | (1) Protected Areas | (a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas? | (a) N | (a) The Project road is close to the Mesurado Wetland designated as Ramsar Convention however no direct impact is expected. However the possibility of indirect affect still exists, monitoring survey for ambient air quality, water quality, noise & vibration and ecosystem along the Project road are conducted. |
| | (2) Ecosystem | (a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (d) Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock? (e) Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? (f) In cases the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments? | (a) N (b) N (c) - (d) N (e) N (f) N | (a) According to survey and discussions with EPA who manages the Mesurado Wetland, it was confirmed that primeval forest, tropical rain forests, ecologically valuable habitats were not encompassed in the Project area. (b) According to discussions with EPA, it was confirmed that the protected habitats of endangered species by GoL and/or international treaties and conventions were not encompassed in the Project area. (c) Significant ecological impacts are not anticipated however in order to mitigate the impacts, the followings measures will be taken. (1) Trees which do not affect road structures in ROW remain. (2) some Green belt is installed along the road. (d) Since the Project road is situated in sub-industrial and residential area, measures such as disruption of migration routes, habitat fragmentation and traffic accident of wildlife and livestock are not necessary. (e) As a part of the Project, about 10 trees will be cut however trees co-habiting with surrounding nature is forested. (f) The Project site is already utilized as sub-industrial and residential area, therefore extensive loss of natural environment is not expected causing new area development. |
| | (3) Hydrology | (a) Is there a possibility that alteration of topographic features and installation of | (a) N | (a) Piers for new bridge is not constructed for this project. |

| | | | | |
|-----------------------|----------------------------|---|--|---|
| | | structures, such as tunnels will adversely affect surface water and groundwater flows? | | |
| 3 Natural Environment | (4) Topography and Geology | (a) Is there any soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed?(b) Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides?(c) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff? | (a) N (b) N (c) Y | (a) Since the existing road passes through relatively flat area, slope failures are less likely to happen. Also based on the geological survey, no soft ground area confirmed.(b) Large-scaled civil works are not expected.(c) It is possible. Protection measures against earth cutting and filling are appropriate slope and hydraulic seeding works. Also it was confirmed that waste soil disposal sites and borrow sites were maintained well. |
| 4 Social Environment | (1) Resettlement | (a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Are the compensations going to be paid prior to the resettlement? (e) Are the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? | (a) Y (b) Y (c) Y (d) Y (e) Y (f) Y (g) Y (h) Y (i) Y (j) Y | (a) 26 involuntary resettlements are caused. In order to minimize the involuntary resettlement, it was to limit the project area to 50ft. (b) At the stage of RAP preparation, stakeholder meetings at two times were taken place and appropriate explanation on compensation and resettlement assistance was given to PAPs. (c) Resettlement cost study was carried out and appropriate resettlement cost was calculated based on the study. (d) PAP states that the compensations is going to be paid prior to the resettlement. (e) Compensation policies are shown in RAP and RAP will be disclosed to public after EPA approval. (f) Vulnerable groups are given particular attention and it is mentioned in RAP. (g) Based on the stakeholder meetings, agreements from PAPs are expected to be obtained. However there are some unidentified PAPs, therefore MPW keeps trying to find out the PAPs by using mass medias and local communities. (h) Organizational framework centering on MPW/IJU will be established. Also budget necessary will be allocated . (i) Monitoring surveys are expected to be implemented properly by both |

| | | | | |
|----------------------|---------------------------|---|---|--|
| | | <p>(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>(i) Are any plans developed to monitor the impacts of resettlement?</p> <p>(j) Is the grievance redress mechanism established?</p> | | <p>internal and external organizations.</p> <p>(j) Grievance redress mechanism is established by reference to past project implemented by World Bank and phase I project.</p> |
| 4 Social Environment | (2) Living and Livelihood | <p>(a) Where roads are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts?(b) Is there any possibility that the project will adversely affect the living conditions of the inhabitants other than the target population? Are adequate measures considered to reduce the impacts, if necessary?(c) Is there any possibility that diseases, including infectious diseases, such as HIV will be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?(d) Is there any</p> | <p>(a)N (b)N (c)Y (d)Y (e)N (f) N</p> | <p>(a) Since the Project is to expand the existing road, the existing means of transport is not expected to be affected.(b) The Project does not affect the local resident on living and livelihood except for PAPs above.(c) Diseases are expected to be brought due to immigration of workers associated with the project. Workers involving the Project are educated by contractor.(d) The Project is expected to contribute mitigating traffic congestion however it is expected to affect traffic accidents because travel speed will be up.(e) Since the Project is to expand the existing road, the movement of inhabitants are not be impeded.(f) Since the Project road passes through almost ground level except for the bridges, a sun shading and radio interference does not be caused.</p> |

| | | | |
|--|---|----------------|--|
| | possibility that the project will adversely affect road traffic in the surrounding areas (e.g., increase of traffic congestion and traffic accidents)?(e) Is there any possibility that roads will impede the movement of inhabitants?(f) Is there any possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference? | | |
| (3) Heritage | (a) Is there a possibility that the project will damage the local archaeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws? | (a) N | (a) No archaeological, historical, cultural, and religious heritage does exist along the Project road. |
| (4) Landscape | (a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken? | (a) N | (a) No significant impact is expected. |
| (5) Ethnic Minorities and Indigenous Peoples | (a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources to be respected? | (a) - (b) - | (a) No ethnic minority and indigenous people does exist. (b) Same above. |

| | | | | |
|----------------------|------------------------|--|--|--|
| 4 Social Environment | (6) Working Conditions | <p>(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?(d) Are appropriate measures being taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?</p> | <p>(a) Y (b) Y (c) Y (d) Y</p> | <p>(a) Construction plan is accordance with Labor Law of Liberia.(b) (c) As tangible measures, safety equipments are installed to prevent accidents. As intangible measures, suitable construction implementation plan for securing safety based on construction safety plan will be prepared. Also it is stated that appropriate education is provided to construction workers and related persons. Moreover monitoring is done to confirm if mentioned above is kept.(d) In order to prevent accidents, safety equipments will be installed. Also appropriate safety education to construction workers, security guards and traffic control staff are mobilized.</p> |
|----------------------|------------------------|--|--|--|

| | | | | |
|----------|---------------------------------|--|----------------------------------|--|
| 5 Others | (1) Impacts during Construction | <p>(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p> | <p>(e) Y (b) Y (c) Y</p> | <p>(a) Mitigation measures against pollution during construction are as follows. Regarding noise and vibration, (1) for the purpose of alleviate traffic congestion, existing 2-lane road is expanded into 4-lane road, (2) the number of surface layer joint on new additional 2-lane road is decreased as many as possible, (3) low-noise construction machineries are used. (4) construction machineries are used properly, also regular maintenance work is implemented. (5) green belt is constructed and tress are planted. (6) construction work is done only daytime around schools and clinics, (7) monitoring is carried out regularly (8) in case night work is implemented, advance notice is given and permission is obtained, (9) crackdown against ill-serviced vehicles are promoted. Regarding water quality, (1) waste water from construction site is not discharged into the rivers directly. (2) construction machinery is not washed in the rivers. Regarding dust and emission, (1) construction machinery is used properly without unnecessary idling. Also regular maintenance work is implemented. (2) sprinkling of water is carried out regularly during dry season. (3) in case of placing backfilling and excavated soil temporarily, the soil is covered by anti-scattering sheets. (4) monitoring is carried out regularly. (5) lead free gasoline is used for construction machinery and vehicles. Regarding construction waste, (1) construction waste is recycled as much as possible. (2) in case recycle is not available, the waste is disposed in appropriate facilities. (b) As mitigation measures against natural environment, (1) trees which do not affect road structures in ROW remain. (2) green belt is installed along the entire road length. (3) ecosystem monitoring is conducted in Stockton Creek and Warner Creek.(c) As mitigation measures against social environment, (1) the poor is given priority to get construction works. (2) movable vendors are allowed to operate in ROW where construction work is not disturbed. (3) traffic control staff is</p> |
|----------|---------------------------------|--|----------------------------------|--|

| | | | | |
|----------|----------------|---|------------------------------|--|
| | | | | allocated to smooth the traffic and avoid accidents (4) temporal busbays are installed in order to secure means of transport for local resident. |
| 5 Others | (2) Monitoring | (a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?(b) What are the items, methods and frequencies of the monitoring program?(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from | (a)Y (b)Y (c)Y (d)Y | (a) Monitoring program for the environmental items was developed and stated in EIA report.(b) Monitoring items, methods and frequencies were determined in consideration of personnel, budget etc. of MPW/IIU. (c) MPW establishes IIU who is in charge of EIA issue. IIU applies budget necessary for the Project implementation in the next fiscal year.(d) EIA/RAP report states format and frequency of the reports. |

| | | | | |
|--------|---|--|----------------|---|
| | | the proponent to the regulatory authorities? | | |
| 6 Note | Reference to Checklist of Other Sectors | (a) Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation). (b) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities). | (a) N (b) N | (a) No large areas of deforestation is expected in the Project. (b) No installation of power transmission lines and/or electric distribution facilities is expected in the Project. |
| | Note on Using Environmental Checklist | (a) If necessary, the impacts to transboundary or global issues should be confirmed, if necessary (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming). | (a) Y | (a) As transboundary or global issues, global warming arising from CO2 emission is expected. However the total of emission volume from the traffic is going to decrease by 40% compared with the no-action. |

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

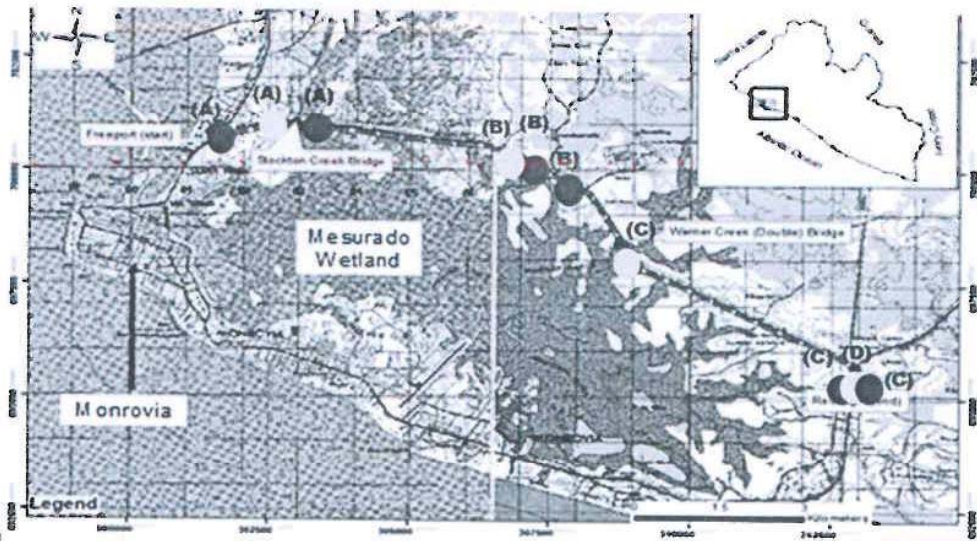
Annex 6 Environmental Monitoring Plan

| Kind of Survey | Parameter | Survey Point (same as each baseline survey ^{*1}) | Upper: Construction Stage Lower: Operation Stage | Responsible Organization |
|--|---|--|---|--------------------------|
| 【Construction Stage】 【Operation Stage】 | | | | |
| Ambient Air Quality | PM _{2.5} , PM ₁₀ , CO, NO _x , SO _x , Wind Direction/Velocity | Starting Point (Urban), Middle Point (Suburb), End Point (Urban) | Every Four Months | Contractor /MPW |
| | | | Every Six months | |
| Noise & Vibration | Noise & Vibration Level (L_{Aeq} · L_{Amax} · L_{Amin}) | Residential Area, School Area, Light Industrial Area, Commercial Area | Every Four Months | Contractor /MPW |
| | | | Every Six Months | |
| Water Quality | pH, SS, EC, COD, DO, Oil, Conductivity, Turbidity, Odor, Color | Stockton Creek, Warner Creek, Water-well | Every Four Months | Contractor /MPW |
| | | | Every Six months | |
| Biological | Fauna | Stockton Creek, Warner Creek | Every Six Months | Contractor /MPW |
| | | | Every Six Months | |

Annex 7 Environmental Monitoring Format

| Air Quality, Water Quality, Noise & Vibration | | | | | |
|---|---|----------|--------|--|---------|
| Item | Parameter | Location | Result | Standard | Remarks |
| Air Quality | PM10 (average 24h) | [A] | | 100µg/m ³ (National) | |
| | | [B] | | 50µg/m ³ (WHO) | |
| | | [C] | | | |
| | SO ₂ (average 24h) | [A] | | 80µg/m ³ (National) | |
| | | [B] | | 20µg/m ³ (WHO) | |
| | | [C] | | (average 24h) | |
| | NO ₂ (average 24h) | [A] | | 80µg/m ³ (National) | |
| | | [B] | | (average 24h) | |
| | | [C] | | | |
| | CO (average 8h) | [A] | | 2,000mg/m ³ (National) | |
| | | [B] | | 1,000mg/m ³ (WHO) | |
| | | [C] | | | |
| Noise | Noise Level (Day Time: 06:01-22:00) | [A] | | 50dB(National, Residential Building) | |
| | | [B] | | 45dB(National, Hospital, School Area) | |
| | | [C] | | 60dB(National, Residential+Industry or small production) | |
| | | [D] | | 50dB(National, Mixed Residential Building) | |
| | Noise Level (Night Time: 22:01-06:00) | [A] | | 35dB(National, Residential Building) | |
| | | [B] | | 35dB(National, Hospital, School Area) | |
| | | [C] | | 50dB(National, Residential+Industry or small production) | |
| | | [D] | | 35dB(National, Mixed Residential Building) | |
| Vibration | Vibration Level (Day Time: 06:01-22:00) | [A] | | 55dB(Ghana, Residential Building) | |
| | | [B] | | 55dB(Ghana, Hospital, School Area) | |
| | | [C] | | 65dB(Ghana, Residential+Industry or small production) | |
| | | [D] | | 60dB(Ghana, Mixed Residential Building) | |
| | Vibration Level (Night Time: 22:01-06:00) | [A] | | 48dB(Ghana, Residential Building) | |
| | | [B] | | 50dB(Ghana, Hospital, School Area) | |
| | | [C] | | 60dB(Ghana, Residential+Industry or small production) | |
| | | [D] | | 55dB(Ghana, Mixed Residential Building) | |
| Water Quality | pH | [A] | | 6.5-8.5(National, WHO) | |
| | | [B] | | | |
| | | [C] | | | |
| | Temperature | [A] | | - | |
| | | [B] | | | |
| | | [C] | | | |
| | me | [A] | | No Color(National) | |

| | | | | |
|---|------------|-----|--|------------------------|
| | | [B] | | |
| | | [C] | | |
| | Odor | [A] | | No Odor(National) |
| | | [B] | | |
| | | [C] | | |
| | SS | [A] | | 30mg/L(WHO) |
| | | [B] | | |
| | | [C] | | |
| | COD | [A] | | 30-50mg/L(WHO) |
| | | [B] | | |
| | | [C] | | |
| | DO | [A] | | <5.0mg/L(National,WHO) |
| | | [B] | | |
| | | [C] | | |
| | E.Coll | [A] | | - |
| | | [B] | | |
| | | [C] | | |
| | Oil&Grease | [A] | | 0.1mg/L(National,WHO) |
| | | [B] | | |
| | | [C] | | |
| WHO:World Health Organization**Remarks:Past trend and current status including remedial measures if necessary | | | | |
| <Monitoring Frequency>Every six(6)months | | | | |



| Regend | | ● :Air Quality | ● :Water Quality | □ :Noise&Vibration | | |
|--|--------------------------|------------------------------|--------------------|--------------------------------------|------------|------------------|
| Coordinates of each Survey Points | | | | | | |
| Survey Point | North:N | Coordinates | | | | |
| | West:W | Air Quality | Water Quality | Noise&Vibration | | |
| [A] | N | 6°20'15.61" | 6°20'18.83" | 6°20'21.85" | | |
| | W | 10°47'33.54" | 10°46'45.99" | 10°47'15.87" | | |
| [B] | N | 6°19'36.61" | 6°20'23.73" | 6°19'06.11" | | |
| | W | 10°44'02.20" | 10°46'49.52" | 10°43'42.61" | | |
| [C] | N | 6°17'33.10" | 6°18'57.07" | 6°18'33.90" | | |
| | W | 10°41'27.29" | 10°43'41.07" | 10°43'28.35" | | |
| [D] | N | - | - | 6°17'44.72" | | |
| | W | - | - | 10°41'07.52" | | |
| Ecosystem<Visual observation of animals> | | | | | | |
| | | Location Date of Survey | Creatures Found | Threaten to Ecosystem(i f any) | Root Cause | Measure Taken |
| 1 | 2017 (First Half) | Stockton Creek YYYY/MM/DD | | | | |
| | | Warner Creek YYYY/MM/DD | | | | |
| 2 | 2018 (Latter Half) | Stockton Creek YYYY/MM/DD | | | | |
| | | Warner Creek YYYY/MM/DD | | | | |
| 3 | 2018 (First Half) | Stockton Creek YYYY/MM/DD | | | | |
| | | Warner Creek YYYY/MM/DD | | | | |
| 4 | 2019 (Latter Half) | Stockton Creek YYYY/MM/DD | | | | |
| | | Warner Creek YYYY/MM/DD | | | | |

| Progress of Compensation for Affected Structure | | | | | |
|---|----------------------------|-------------------------|------------------|-------------------------------|--|
| Item | Total Number of Structures | Payment of Compensation | Vacation of Land | (Expected) Date of Completion | |
| Concrete Flat/Zinc Roof | 7 | 0% | 0% | YYYY/MM | |
| Kiosks | 2 | 0% | 0% | YYYY/MM | |
| Zinc/Plywood Round (Makeshift) | 6 | 0% | 0% | YYYY/MM | |
| Containers | 3 | 0% | 0% | YYYY/MM | |
| Fence - concrete | 3 | 0% | 0% | YYYY/MM | |
| Fence - barbed wire | 2 | 0% | 0% | YYYY/MM | |
| Petrol Stations | 3 | 0% | 0% | YYYY/MM | |
| Total | 26 | 0% | 0% | YYYY/MM | |

| Progress of Assistance | | | | |
|--|----------------------------|-----------------------|-------------------------------|--|
| Item | Total Number of Households | Payment of Assistance | (Expected) Date of Completion | |
| Compensation for Loss of Income (USD200 for formal businesses and USD50 for informal businesses) | 25 | 0% | YYYY/MM | |
| Relocation Assistance (USD300 per Container x 3) | 3 | 0% | YYYY/MM | |
| Relocation Assistance (USD150 per other removable structure (kiosks)) | 4 | 0% | YYYY/MM | |
| Disturbance Assistance (USD400 per HH for formal businesses and USD150 per HH for informal businesses) | 25 | 0% | YYYY/MM | |
| Assistance to Vulnerable People (USD50 per HH with female heads) | 5 | 0% | YYYY/MM | |

| Procedures | | Submission of Monitoring Report | |
|---|------------|---------------------------------|---------------------|
| Procedure | Date | Internal Monitoring | External Monitoring |
| Institutional Arrangement | | 2016(4th qtr) | YYYY/MM/DD |
| Establishment of RAP Implementation Committee | YYYY/MM/DD | 2017(1st qtr) | YYYY/MM/DD |
| Establishment of Grievance Redress Committee | YYYY/MM/DD | 2017(2nd qtr) | YYYY/MM/DD |
| Detailed Asset Survey and Compensation Estimation | | 2017(3rd qtr) | YYYY/MM/DD |
| Start of Survey | YYYY/MM/DD | 2017(4th qtr) | YYYY/MM/DD |
| Completion of Survey | YYYY/MM/DD | External Monitoring | |
| RAP Budget | | 1st | YYYY/MM/DD |
| Submission | YYYY/MM/DD | 2nd | YYYY/MM/DD |
| Approval | YYYY/MM/DD | 3rd | YYYY/MM/DD |

| Grievance Redress | | | |
|-------------------|---|--------------------|--------------------|
| | Outline of Grievance and Remarks (if any) | Grievance received | Grievance resolved |
| 1 | | YYYY/MM/DD | YYYY/MM/DD |
| 2 | | YYYY/MM/DD | YYYY/MM/DD |
| 3 | | YYYY/MM/DD | YYYY/MM/DD |
| | | YYYY/MM/DD | YYYY/MM/DD |
| | | YYYY/MM/DD | YYYY/MM/DD |

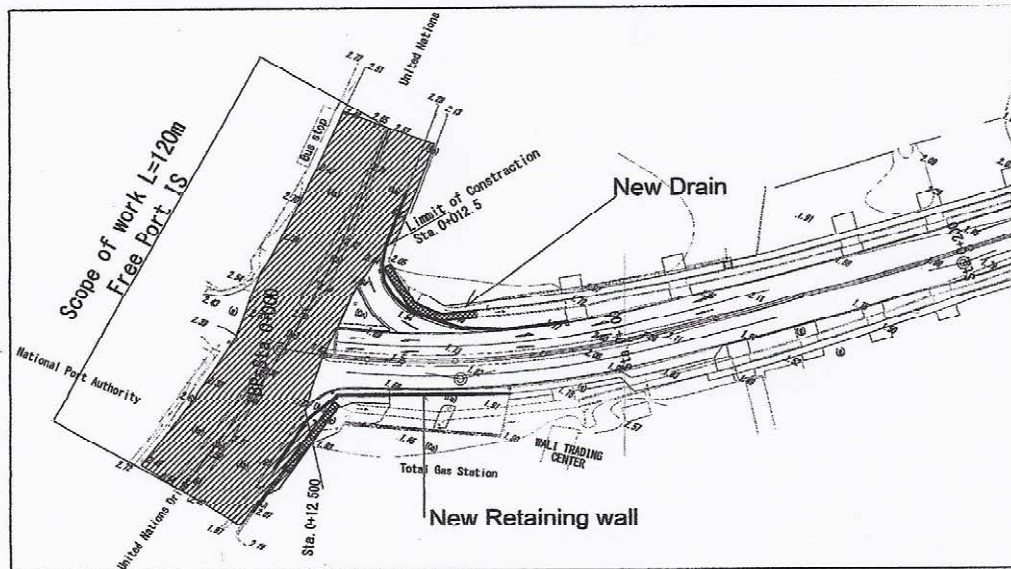
| Public Consultation | | | | |
|---------------------|--------|-------|------------------------|------------|
| | Agenda | Place | Number of Participants | Date |
| 1 | | | | YYYY/MM/DD |
| 2 | | | | YYYY/MM/DD |
| 3 | | | | YYYY/MM/DD |
| | | | | YYYY/MM/DD |
| | | | | YYYY/MM/DD |

Technical Note
on
The Preparatory Survey
on
The Project for Reconstruction of Somalia Drive in Monrovia Phase 2
in the Republic of Liberia

Ministry of Public Works (MPW) and JICA Preparatory Survey Team has discussed and confirmed following matters. It is, however, understood that the decision for the Draft Final Report will be made through the discussions with concerned Japanese agencies during analyses in Japan.

1. **Scope of the Project**

- a. The scope of the Project is from Freeport Intersection to end point, STA. 13+200 (same as phase-1)
- b. Improvement of Freeport Intersection for the purpose of securing proper rainwater discharge inside / around the intersection is included in the scope of the Project as below.



- c. Improvement of the existing drainage outlets along Somalia Drive is included in the scope of the Project, where necessary.
- d. Two bridges on Somalia Drive (Stockton and Double Bridges) are not included in the scope of the Project. (Reconstruction of Stockton Bridge and renovation of Double Bridge are included in the scope of the Phase 1 project.)

2. **Design Standard** (same as Phase 1)

- | | |
|---------------------------|---|
| a. Design Standard | : AASHTO is basically applied. (Japanese Standard is also applied complementary.) |
| b. Road Classification | : Urban Arterial |
| c. Design Speed | : 60 km per hour |
| d. Pavement Design Period | : 10 years |

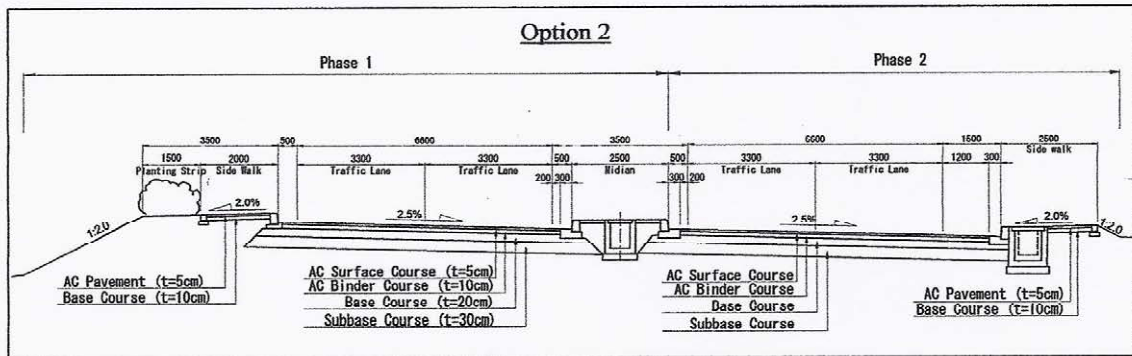
e. Standard Axle Load : 11.5 ton (based on ECOWAS standard)

3. **Geometric Standard** (same as Phase 1)

- a. Cross Slope : 2.5 %
- b. Maximum Super Elevation : 4.0 %
- c. Minimum Curve Radios : R = 135 m
- d. Curve Radius (without Super elevation)
- e. : R > 1,310 m
- f. Equivalent Maximum Relative Slope : 1/167
- g. Minimum Longitudinal Gradient : I = 7.0%
- h. Minimum Vertical Curve : K = 18.0 (Sag), K =11.0 (Crest)

4. **Cross Section**

Typical cross section is shown below;



Typical Cross Section

5. **Street Lights**

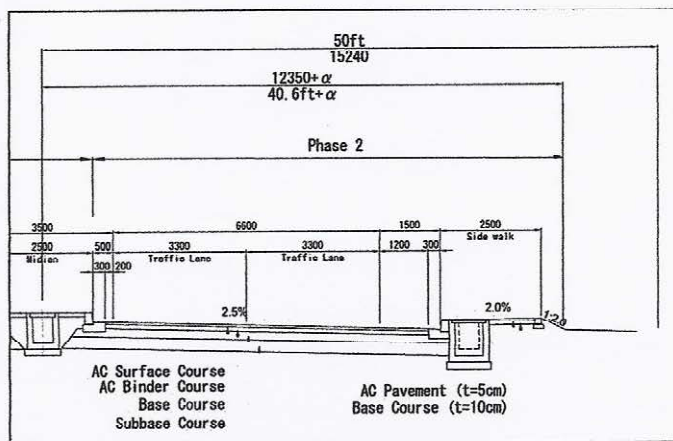
Street lights will be newly installed basically at intervals of 50 m along the Somalia Drive phase-2 side.

6. **Cross Walk**

Crosswalk will be provided at / near major intersections, bus stops, Churches, hospitals and schools.

7. **Environmental and Social Consideration**

- a. Environmental & Social Impact Assessment (ESIA) Report and Abbreviated Resettlement Action Plan (ARAP) are prepared based on the impact range of the Project, which is 50.0 feet (15.24m) from the median centerline.



Impact Range Plan

- b. Time schedule of ESIA and RAP is shown below and MPW makes maximums efforts to obtain ESIA License of the Project from Environmental Protection Agency (EPA) until the due date.

| | | Year | 2016 | | | | | | | | | | |
|--------------------------------------|--|-------|------|---|---|---|---|---|---|---|----|----|--|
| | | Month | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| Environmental | Preparation of ESIA Report by Local Consultant | | ■ | ■ | ■ | ■ | | | | | | | |
| | Review of ESIA Report by MPW and JICA | | | | | ■ | ■ | | | | | | |
| | Submission of ESIA Report to EPA | | | | | | | ▲ | | | | | |
| Social | Preparation of Draft ARAP by Local Consultant | | ■ | ■ | ■ | ■ | | | | | | | |
| | Review of Draft ARAP by MPW and JICA | | | | | ■ | ■ | | | | | | |
| | Submission of Draft ARAP to EPA | | | | | | | ▲ | | | | | |
| Acquisition of ESIA License from EPA | | | | | | | | | | | | ▲ | |

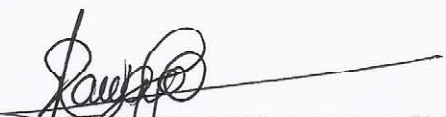
8. **Memorandum prepared by MPW**

JICA Preparatory Survey Team received a memorandum prepared by MPW on 2nd March 2016. Upon receiving the memorandum, JICA Preparatory Survey Team will design details of project component in consideration of the memorandum and feed back to MPW during second investigations in Monrovia scheduled in June in 2016.

Rough Design Drawings & Standard Specifications will be prepared in Japan based on the above conditions and discussions with MPW during the second investigation in Monrovia. The drawings and specifications will be presented to MPW during the explanation of Draft Final Report, which is scheduled in October 2016.

4th March 2016

Noted by



Claude E. Langley
Deputy Minister for Technical Service
Ministry of Public Works

Noted by



Tsuyoshi Yamajuku
Chief Consultant
JICA Preparatory Survey Team

Attachment

- ✓ Recommendation and Request for the Inclusion of Intersections and Utilities for the Somalia Drive Phase 2 Pavement Design, 2nd March 2016, Ministry of Public Works

Page 3 of 3





Republic of Liberia
Ministry of Public Works
P.O Box 9011, 107 Lynch Street
Monrovia, Liberia



MEMORANDUM

TO : The Somalia Drive Phase II Design Team
Japanese International Cooperation Agency (JICA)

From : Hon. Claude Langley *[Signature]* 3-2-16
Deputy Minister for Technical Services
Ministry of Public Works

Subject: Recommendation and request for the inclusion of intersections and utilities for the Somalia Drive phase II Pavement design

Date : March 2, 2016

Greetings:

This is to bring to your attention that after a successful review of the options provided the Ministry of Public Works would like to present the following points for the design consideration of phase II.

- I. That option two is consider for the road design without the permissible pavement. This should also consider planting area on phase II.
- II. That reinforced concrete culvert or other culverts 750mm diameter be replace with 900mm and above reinforced concrete culverts.
- III. That the proposed drainage system design for Freeport area be discharge into the Stockton creek.

Additionally, these components when considered in the second phase of the project will increase the overall performance of the project.

- I. That the design consider for major intersection on the Somalia drive
 - a. Freeport
 - b. New Georgia
 - c. Barnersville Junction
 - d. 72nd/ SKD Boulevard

e. NezoE Jxn

[Signature]

- II. That utilities conduits allocation be under the road
- III. That utilities dots be at specific interval
- IV. That lightings (both streets and traffic lights) are included

Thanks for your consideration as we partner together to make Liberia better.

Regards

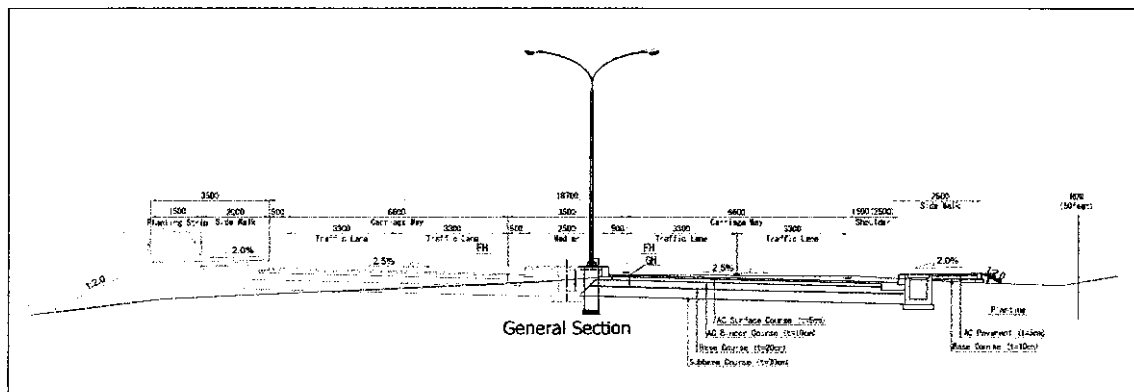
A handwritten signature in blue ink, consisting of a stylized 'A' followed by a vertical line and a flourish.

Technical Note
on
The Preparatory Survey
on
The Project for Reconstruction of Somalia Drive in Monrovia Phase 2
in the Republic of Liberia
No.2

Ministry of Public Works (MPW) and JICA Preparatory Survey Team has discussed and confirmed following matters. It is, however, understood that the decision for the Draft Final Report will be made through the discussions with concerned Japanese agencies during analyses in Japan.

1. Cross Section

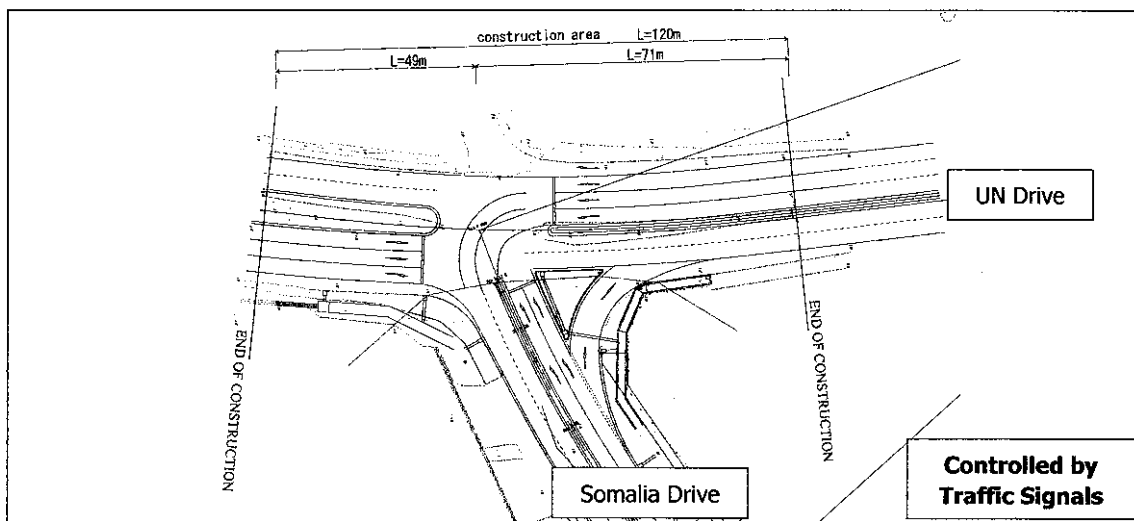
Typical cross section is shown below;



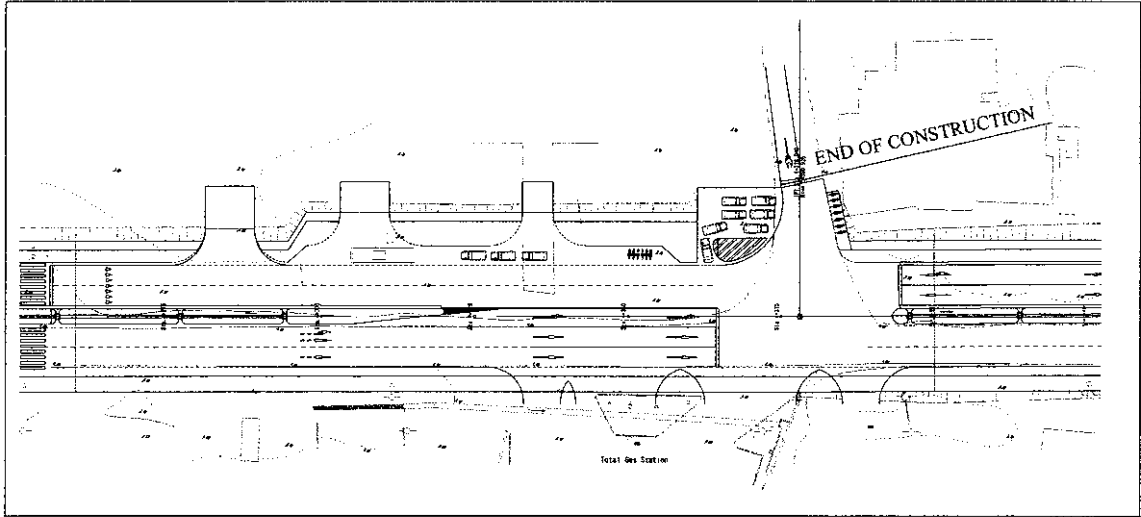
Typical Cross Section

2. Intersections

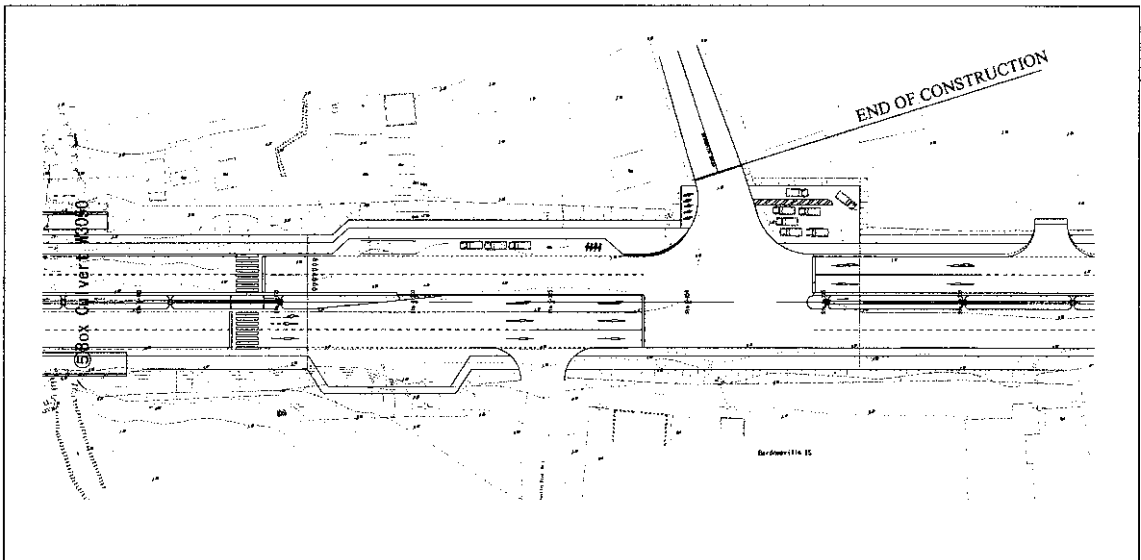
Detail of major intersections is shown below;



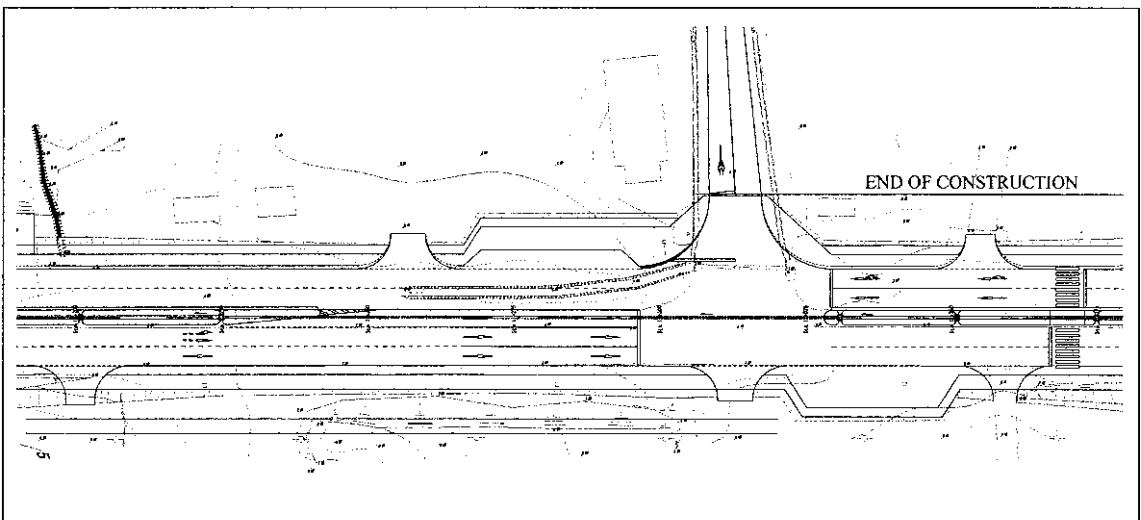
Free Port Intersection



New Georgia Intersection

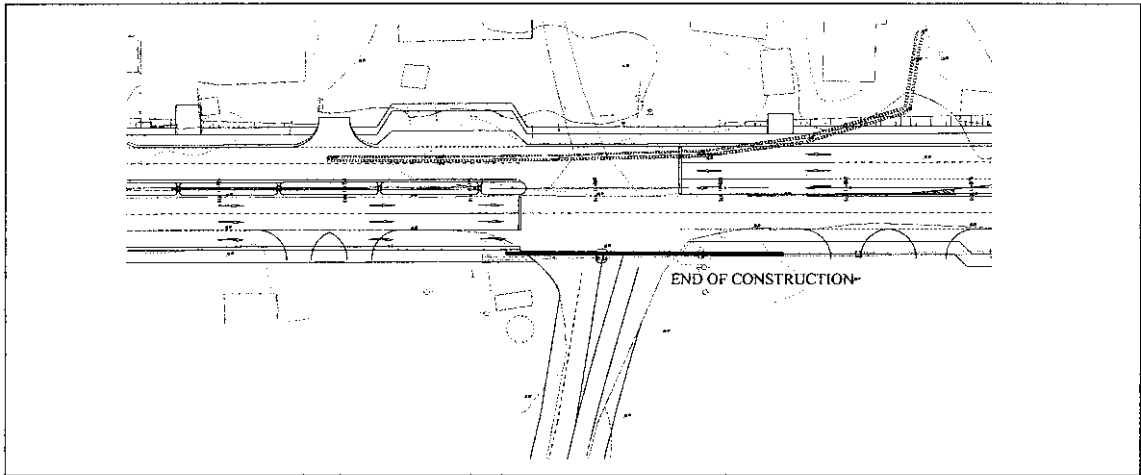


Barnesville Intersection



Neezoe Intersection

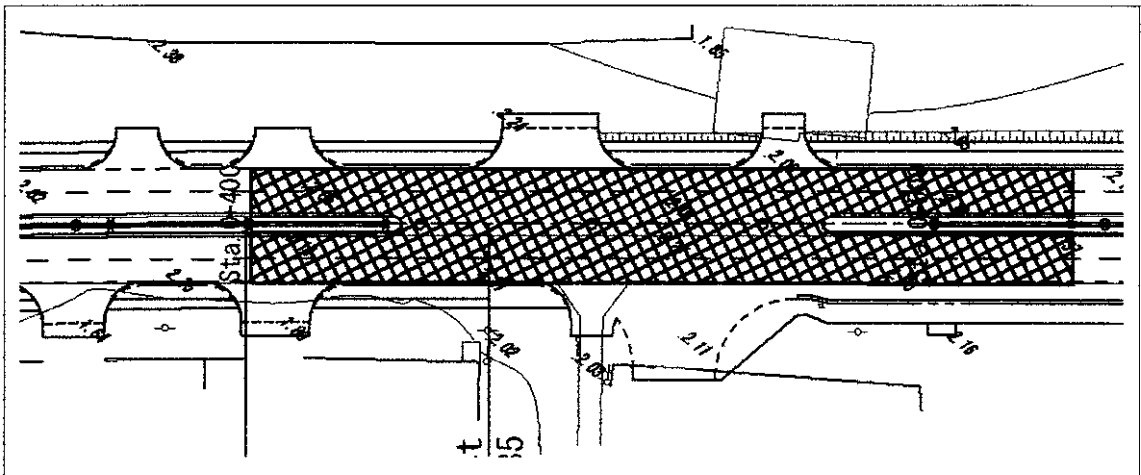
A handwritten signature is located in the bottom right corner, with a long horizontal arrow pointing to the left drawn above it.



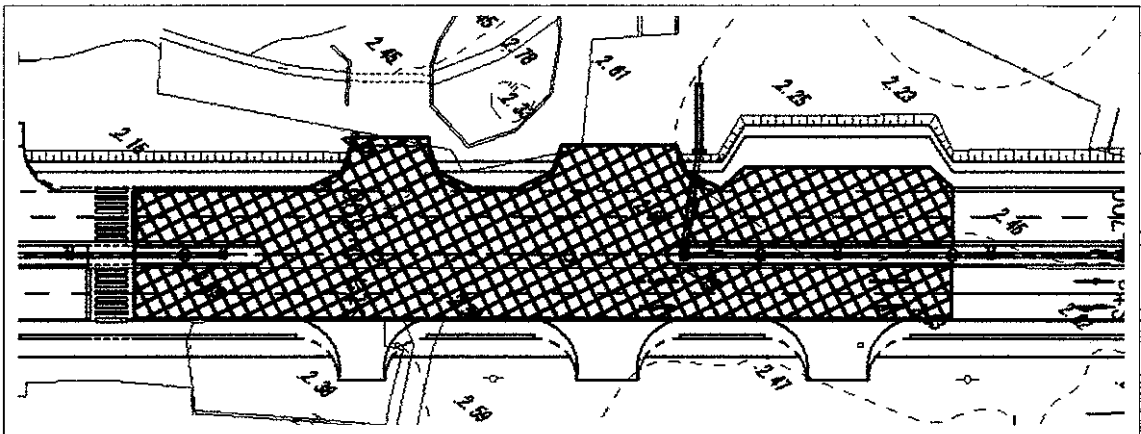
72nd, SKD Bluebird Intersection

3. Concrete Pavement

Sections where a lot of large-sized cars pass are designed to be concrete pavement instead of asphalt pavement. Detail sections and area are shown below;

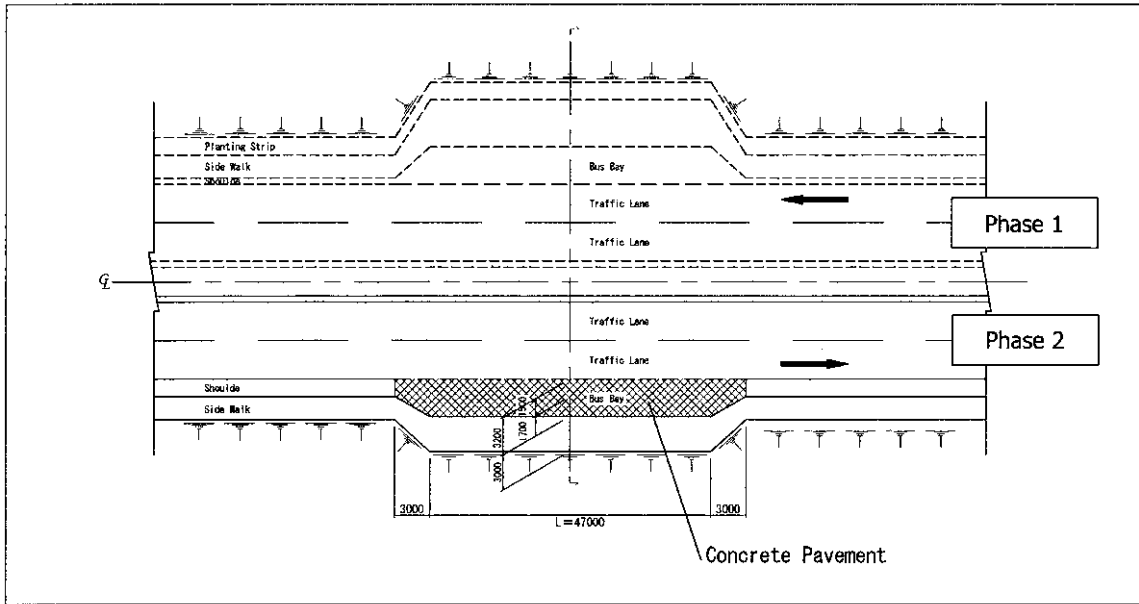


Station 0+600 (Grain Factory)



Station 0+700 (Cement Factory)

Page 3 of 4



Bus Bay

4. Environmental and Social Consideration

Involuntary resettlement for the Project does not start until MPW receives ESIA License from EPA and shall be implemented in accordance with approved Abbreviated Resettlement Action Plan.

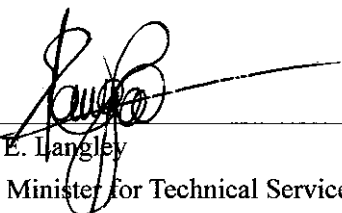
5. Unexploded Object (UXO)

UXO along Somalia Drive (Phase 2 area) shall be explored by MPW at his own expense before the project implementation and a certificate testifying completion of the exploration shall be obtained.

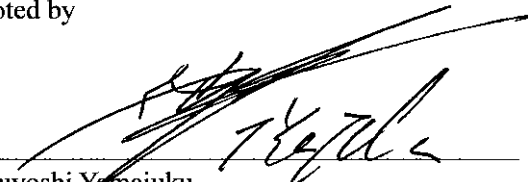
Draft Design Drawings & Standard Specifications together with Draft Final Report will be prepared in Japan based on Technical Notes (No.1 & No.2) and presented to MPW at the explanation of Draft Final Report, which is scheduled in October 2016.

2nd August 2016

Noted by


 Claude E. Langley
 Deputy Minister for Technical Service
 Ministry of Public Works

Noted by


 Tsuyoshi Yamajuku
 Chief Consultant
 JICA Preparatory Survey Team